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NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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ORIGINAL COMMUNICATIONS.

VALEDICTORY SPEECH.

Delivered at Asheville, June 1st, 1881, before the North Carolina Medical Society at their 28th Annual Meeting.

By Richard B. Haywood, A. M., M. D., President of the North Carolina Medical Society and Physician to the "North Carolina Institution for the Deaf and Dumb and the Blind."

The term of service as presiding officer which your partiality has assigned me is about to expire, and custom has made it one of the unwritten laws of our Society, that in retiring from the chair, the President should make some remarks in the nature of a valedictory. This I do not propose to do in the literal meaning of the word but will endeavor to throw out a few remarks for your reflection on some of the defects of our American system of medical education and progress from ancient empiricism to the modern advanced state of medical science.

The rivalries of the numerous medical schools tend more to degrade the profession and impair and degrade the medical character than all other causes combined. One by one the requirements once

made from students, of preliminary education and thorough study are obliterated, until now success does not depend upon knowledge entirely, for says Piexotto, "we have many physicians whose knowledge of the rules of orthography are often in an inverse ratio to their medical success.

In Vienna, before commencing the study of medicine, the student must produce satisfactory evidence that he has attended the primary schools four years, and have spent six years in the grammar schools, and have attained a certificate of proficiency in Greek, Latin, Mathematics, Astronomy, History and the Modern languages.

In Bavaria, after the ordinary collegiate education, two years are devoted to preparatory studies, including logic, physics, botany, natural history, mineralogy and chemistry, and a satisfactory examination in *all* these must be passed.

In Paris, before a young man can enter upon his medical studies, he must have graduated *both* in the *arts and sciences*.

In the United States, alone of all the civilized countries, the student enters the halls of medicine without the slightest test of his fitness for the studies he is about to undertake and no examination as to his previous education. The learned University student sits and listens to the same lectures, and at the end of the course is subjected to the same final test of his professional attainments as the old field schoolman who understands but little of the nomenclature of the lecturer. How then is it possible for two students so different in their capacity to understand, to approach an *equality* of practical skill.

Medical attendance on lectures in Austria and France is fifty months. In Prussia and other German States forty months, in Great Britain and Ireland twenty-four months, while in the United States we undertake to produce a full blown competent physician in eight months, or one-third of the time deemed necessary by the lowest of the European schools! In Paris, facilities of the amplest kind are furnished for clinical teaching. Five hundred beds are specially set aside for this purpose, attended by nine clinical professors and in addition to this, 6,000 beds are at all times accessible to him.

European professors are paid a salary, on an average, of \$2,000 per annum, hence they are more thorough and impartial in their

examinations, seeing no graduating fee of forty dollars to be lost, staring them in the face, in case this or that man is rejected. In Vienna, students are examined by each professor at the end of every six months before they are permitted to pass to a higher class.

Wilde says that at the completion of the course of study, the pupil is obliged to lay before each of his examiners a history of two cases attended by himself in a medical clinic. He then undergoes an examination in anatomy, botany, natural history, physiology, special and general pathology, medical, surgical and general therapeutics, chemistry, legal medicine and ophthalmology, *after which* he is required publicly to defend a thesis written by himself in the *Latin language*.

Let us turn again to our country and see how unfavorably we compare with foreign schools, in regard to medical education. The learned Dr. Bard, of New York, in 1819, inveighed against our custom of hurrying young men through the medical schools, but with little effect. That great and learned man, whom many of you recollect, Dr. Samuel Jackson, of the University of Pennsylvania, said in 1833, "there is but one way of rescuing our profession from a degrading rivalry with empiricism, and that is to raise the medical instruction of our country to a level with the philosophical character belonging to our science."

Many of you recollect what was called an examination in our day. In 1843, Prof. Hare, of the University of Pennsylvania, was taken sick and could not proceed with the examination of the graduating class. Prof. Chapman, of the Chair of Practice, was appointed in his stead to examine the class on his particular branch, Chemistry. The first student who made his entry into the laboratory was a North Carolinian. What is this! said Chapman, handing him something he picked up from the table. The boy fully sensible of the grave importance of a correct answer, scratched his head doubtfully, rubbed the article with his finger, tasted it, handing it back, said triumphantly, its a piece of *chalk*, sir. *Very* right, sir, *very* right, you can pass, you know quite as much about Chemistry as I do. A French writer, in one of their medical journals, commenting on the faculty of manufacturing doctors in the United States says, in that country they have one doctor to every six hundred inhabitants. That is, says he, they began on that basis, afterwards,

there were not so many inhabitants. But with all our shortcomings there is not a young man now before me, if I was sick that I would not prefer to Hippocrates, that I would not prefer to Galen or Sydenham, and that I would not *infinitely* prefer to that great idol of the Philadelphians, Dr. Rush.

Hippocrates is regarded as the father of medicine, having raised it from a system of incantation and superstitious rites, practiced by priests, to the high dignity of a learned profession. He was a man of vigorous intellect, and had he lived in the present advanced state of our science, would have adorned the foremost rank. Cramped by the religious superstitions of the times, which forbade the dissection of dead bodies, he had little or no knowledge of anatomy, and taught that the origin of *all the veins* was in the *liver*, that the arteries were filled with *air*, and that the human body was constituted of four *humors*, blood, yellow bile, black bile, and phlegm, the preponderance of any one of which produced certain diseases. This old gentleman is what might be considered the patron saint of our profession, and from the foregoing doctrines you will readily see what small claims patron saints have to the dignity of canonization. But whatever might be considered, his shortcomings by the profession of the present day, there was one redeeming quality in his teachings by which he will ever be remembered. His biographer says "he relied, perhaps, too much on the healing power of nature and the remedies by which he *assisted* her were mostly of a simple character." This was the key note which Sydenham took up in 1660.

Galen, another bright light of medicine, laid great stress on *critical days* which he taught to be influenced by the *moon*. He seemed to have placed more faith in *amulets* than in medicine. The different sects of medicine, dogmatics, empirics, eclectics, &c., were all merged in his followers. His practice was based on two principles: 1st, that disease is contrary to nature and is to be overcome by that which is contrary to disease itself, and 2d, that nature is to be preserved by that which has relations to nature.

Galen reigned paramount until the last three hundred years and to question the infallibility of Galen was considered an unpardonable offence in the profession. The records of the London College of Physicians show this fact. In 1559, Dr. Geynes was cited before

the College for impugning the infallibility of Galen. He appeared, humbly recanted and was reinstated in the College. Sydenham was the first English speaking physician who was bold enough to attack the heroic doctrine of that age, but with little general success as it appears: for nearly two hundred years after we hear Professor Rush, of the University of Pennsylvania, who is regarded as the founder of scientific medicine in this country, teaching his class, that fever is a disease of the blood, and that the more *blood you extract* the more *fever you overcome*. “*Bled*,” said he to his class, “as long as you can find blood. If you can’t get blood get water, and if you can’t get water get wind.” Within my own recollections this doctrine prevailed in North Carolina. A case of remittent fever rarely lasted more than three days, and when I tell you the treatment you will wonder, no doubt, how they lasted so long. The patient was bled repeatedly, as many as six or eight times in forty-eight hours. Ten grains of calomel and ten of jalap were administered, followed every two hours by what was called in those days *French powders* (an inferior kind of Seidlitz) not a *drop* of water or other liquid was allowed and *no food*. A case rarely ever recovered and people fled from my town as the people now do from the plague-stricken cities of the Mississippi. I bear on my own arm to-day, a mark made when only five years old by a very eminent disciple of Rush who bled me because he said I *looked bilious*. Aristides was a hypochondriac, and we are told was a victim of the Aselepiades for ten years. He was alternately purged, vomited, and blistered, given hot baths in summer and cold baths in winter. This severity of treatment, he was made to believe by the oracle, was by order of Esculapius himself, whom he importuned continually for restored health, until fatigued by his importunities, the God ordered him to lose *one hundred and twenty pounds* of *blood* which he very judiciously took the liberty of declining!

Disease, instead of being a perversion and lowering of the vital powers, has been for ages regarded by some of the best minds our profession has ever produced, as an *exaltation* of those powers requiring depressing medicines. It was regarded as an entity, a poisonous invasion of the human system requiring herculean means to eradicate it, and efforts to expel it from the system with the powerful drugs invariably recommended. The more modern view which is now held

almost universally by the best minds of our profession, is that it has not a positive, but a negative existence; not a new excess of action, but a deficiency; not a manifestation of life, but partial death; and hence the tonic treatment of disease has been adopted almost universally in every hospital of any note in the world.

Hecatombs of victims were piled up before this reformation in the profession and many valuable lives sacrificed that the world could illy afford to lose. No professional man now before me can read an account of the medical treatment of Lord Byron at Missaloughi, and General Washington at Mt. Vernon, without feeling a blush of shame for the professional brethren who officiated on those occasions. Fletcher, the servant of Byron, in describing the circumstance attending his lordship's death says, that "his lordship on taking his daily ride got wet and complained of a bad cold and a little fever at night. The next day he complained of pain in his bones and headache. On the third day I was alarmed and went to Dr. Bruno and Dr. Millingen, the two medical attendants, and inquired minutely into my master's present illness; both replied there was no danger and all would be well in a few days. On the next day I found my master in such a condition that I supplicated him to send to Zante for Dr. Thomas. This he at first declined to do and repeatedly said he was sure the doctors did not understand his disease. They tell me, said his lordship, that it is only a cold which you know I have had a thousand times. With respect to the medicines given my master, I could not persuade myself that those of a strong purgative nature were the best adapted to his complaint, concluding that as he had taken nothing into his stomach the only effect would be to create pain, indeed this must have been the case with a person in perfect health. The whole nourishment taken for eight days consisted of a small quantity of broth at two or three different times and two spoonful of arrow root the day before his death. The first time I heard of their intention of bleeding him was on the 17th, the day before his death, when it was proposed by Dr. Bruno, which was at first objected to by my master, who asked Dr. Millingen if there was any great necessity of blood-letting. The latter replied, it might be of service but might be deferred until the next day; and accordingly, my master was bled in the right arm and a pound of blood taken. My master continued to

get worse but Dr. Bruno said he thought letting blood *again* would save his life ; I lost no time in telling my master how important it was to comply with the doctors wishes. To this he replied by saying he feared they knew nothing about his disorder and then stretching out his arm said ‘here take my arm and do whatever you like with it.’ His lordship continued to grow weaker, and on that day, the 17th, was bled twice in the morning and again at two o’clock in the afternoon ; the bleeding on both times was followed by fainting fits, and he would have fallen down at both times had I not caught him in my arms. On the 18th, his lordship addressed me frequently and seemed very much dissatisfied with his medical treatment. I then said *do* allow me to send for Dr. Thomas, to which he answered do so ; but be quick. I am sorry I did not let you do so at first for I am sure they have mistaken my disease. On returning to my master’s room, he said, have you sent ? ‘I have, my Lord,’ was my answer, to which he said you have done well for I would like to know what is the matter with me. I could perceive he was getting weaker every hour.”

Fletcher goes on to describe the inarticulate words he strived to speak and finally his collapse and death. The only food allowed in nine days, after four bleedings *ad deliquium anime* was the two spoonsful of broth before mentioned.

Now, gentlemen, if Dr. Bruno and Dr. Mellingen had shot a four pound shot through his lordship’s breast, they could not, in my opinion, have more effectually killed him than they did by those slow but sure processes.

General Washington fell into the hands of Rush and his disciples who did not wait for his vital powers to be exhausted before bleeding ; but commenced to exhaust the vital powers by immediately commencing that operation. Rush’s ten and ten, as Cobbett called calomel and jalap, were repeatedly given, and four or five copious blood-lettings made. Byron was young and had the vitality of a mud-turtle. He stood his men nine days. Washington was old and weak and succumbed in three days, and for what do you think all this was for ? why, for an ordinarily sore throat, that any old woman in the country ought to have cured with spirits of turpentine and a flannel rag in one day.

Now, gentlemen, you will infer, and properly so, that I am no

bleeder or liver doctor, and if I could impress all my patients with a positive conviction they had no livers I would gladly do so, for as long as they are conscious of the fact they are never satisfied unless you are continually poking at it with mercurial stimulants. An intelligent gentleman from South Carolina called on me in Raleigh to attend his wife in her twelfth case of labor and stated to me that he thought the child would certainly die a short time after its birth, as the eleven his wife had given birth to, died within three weeks of their birth with jaundice. The child was born and on the 6th day became thoroughly jaundiced. I directed a dose of castor oil and the parents being very intelligent people, I stated to them it was for the purpose of removing the excess of bile from the intestines to prevent its being taken up and deposited on the surface by the absorbents. But, said he, Dr. Blank always give my other children calomel. Well, said I, if Dr. Blank lost eleven cases out of eleven I think that is the strongest argument why the treatment should be changed. The child was cured and is now a reigning belle in South Carolina. But little reputation was gained for me. Had I killed her *secundem artem* no doubt it would have been said, poor fellow, he worked hard but she died in spite of him.

I once had the good fortune of witnessing a consultation between Velpeau and Gerdy in the *Hôpital la Charité*, Paris, over a patient with pneumonia. Gerdy proposed to bleed him. Bleed him, says Velpeau! bleed him! What do I want to bleed him for? Don't kill your patient; but give God A'mighty a chance! Well, says Gerdy, I am willing that God A'mighty should have a *reasonable* chance, but I don't think it will do always to give him *too much rope*.

One advantage the ancients had over modern medicine was the proper appreciation of the physician and a just compensation for his services. It is a recorded fact that Ptolemy Philadelphus gave Cleombrotus, a professor at Alexandria, one thousand talents, about seventy-five thousand dollars of our money, for curing King Antiochus of a dangerous malady. The State of North Carolina, per contra, pays a very competent and estimable physician, fifty-two cents a head for treating thirteen hundred and eighty-three cases among the convicts in her penitentiary and requires him to furnish his own conveyance and driver. This is scandalous and ought to be remonstrated against by the profession, more especially when it is

known that the State pays a lawyer five hundred dollars, to go to an adjoining county, to look into a faulty bill of indictment. They are both skilled laborers and should be treated alike.

There is no reason why this disparity should be made in estimating our profession unless it is in consequence of the multiplicity of cheaply made, incompetent doctors. It is no degraded profession. God himself has dignified it by condescending to practice the healing art. Hence, in Catholic countries, more especially in Austria, Spain, and the Spanish speaking States of South America, it is to-day placed at the very head of *all* professions.

And now let me add a word to our young brethren who are just entering upon the threshold of the profession. If you agree with Flint, Austie, Sir Wm. Gull, and I might say every leading modern light of the profession that disease is not an *entity*, that it is not an *exaltation* of vital forces but a *depression*, that it is not an *excess of life*, but *partial death*, then your own good North Carolina common sense will teach you how to treat your case. Do not, young man, commit the too common error that there is great and intrinsic value in medicine itself, and that the more medicine you give the more disease you overcome; and that the high road to health is through the liver and intestines. Men like to be humbugged and members of our profession, I am sorry to say, have not been slow to avail themselves of this weakness in humanity, and hence, the too common expression "your liver don't act." Chalmeil says the liver is an organ that has concealed more ignorance than all the other organs of the human body combined. In this I partly agree with him, for I have never seen any rational opinion expressed why bile that performs a very important part in carrying on digestion should be regarded as a poison, whilst secretions from other glandular organs are looked upon as innocuous. The blood was for many hundred of years regarded as the source of all disease, and thousands of lives were sacrificed to the lancet and hydrogogue cathartics before they gave way to rational medicine. It is the remnants of the old leaven of "black bile, yellow bile, blood and phlegm" promulgated by Hippocrates three thousand years ago, and if scientific physicians of the present age don't set their faces against it, it will probably continue for three thousands years more.

I said men liked to be humbugged, but it has been a disputed

question in the profession whether the practice of it is allowable. There is one species of deception that is allowable and is practiced by the most eminent men of our profession at the present day, that is the use of palliates or expectant medicines.

The influence of the mind on the body is conspicuously manifested in disease and must have shown itself at times to the most casual observer. Patients are naturally alarmed concerning their disease and anxious to be continually taking medicine to eradicate it. Popular opinion is, that all disease will terminate in death unless timely relief is given by medicine, and if the physician says there is no necessity of taking medicine more than once or twice a day the patient will soon lose confidence and the effect of the mind on the body in this case will be deleterious. "Despise not the opinions of blockheads," says Christopher North, "for in society they form a *great* majority and are generally the most *influential*." Do not, therefore, consider it unprofessional to use expectant medicines in such cases for it is done universally, by the best men of the profession in the old and new world.

Professor Graves, of the University of Dublin, than whom a greater man in practice this century has not produced, says in one of his clinical lectures: "In the treatment of fever it is frequently of importance to gain time, and periods will occur in long fever in which there may be no direct indication for the exhibition of any powerful remedy; at the same time, such is the ignorance of non-medical persons, and the anxiety of the patient's friends is so intense, that they cannot imagine how it is possible for an attentive physician to let twelve hours pass away without doing something. The mere circumstance of seeing the fever going on, is sufficient proof to them of the necessity of making renewed efforts for its removal. If any of you happened to be ill, I dare say you could scarcely bear to pass many hours without taking something which you supposed might prove either immediately or remotely beneficial. Consequently we could not treat fever in a satisfactory manner without medicines of what may be termed of an expectant character and calculated to fill up the spaces intervening between those periods where active treatment is necessary. You are not to suppose that in ordering such medicines you are acting a dishonest part and practicing a deception unworthy of your profession, on the

contrary, your conduct is perfectly just and proper; and though you were convinced that no medicine is required, still it will be necessary to prescribe something if you do not wish to lose the confidence of your patient. Again : if at a period when you say that no medicine is necessary, and when the patient has passed twenty-four hours or two days without taking anything, an unexpected turn in his disorder should take place, people will be apt to say, either that you did not know what to do, or that you took no steps to obviate the threatened change and that one or two days were completely lost. Conduct like this has frequently brought down a great deal of censure on medical men. It may be said that these are mere prejudices and beneath the dignity of a man of firm and consistent character ; but when prejudices are intimately blended with human nature and constitutes as it were a part of it, it is much better in many cases to submit to them, particularly when a compliance does not involve any sacrifice of principle. In cases of acute disease, of any considerable duration and especially in private practice, there are periods when medicines of an expectant and temporizing character must be employed and hence the introduction of a class of remedies extensively used in fever and other complaints and generally denominated palliative or expectant medicines. There are other remedies which have a general tendency to assuage thirst, gently promote secretions from the skin, kidney and intestinal canal, and which are known to possess, at least, the negative quality of doing no harm. Neutral mixtures are of this class and answer the purpose admirably.

The medical profession from the time of its creation has been traveling onward in the pursuit of truth and knowledge, and now that we have reached a lofty and commanding position with the broad lights that modern science has thrown around it, makes it grateful to look back on our past history. Touching by the Sovereign, for scrofula, was universally practiced from the reign of Edward, the Confessor, down to the accession of the house of Brunswick, many wonderful cures were effected, and Dunglison says the curative influence was accomplished by the new impression made on the nervous system, through the moral on the physique and the imagination through the senses, modifying the whole system of nutrition. Ninety-two thousand one hundred and seven persons were touched

in twelve years by Charles II, and Wiseman, an eminent London surgeon, in his treatise on scrofula says that His Majesty cured more cases in one year than all the physicians of London had cured in one age.

It is recorded that a poor woman attended several confirmations in St. Paul's, and was at once recognized by the Bishop. Pray, good woman, have I not seen you here before? said he. Yes, replied the woman, I get me confirmed as often as I can, they tell me it is good for the *rheumatiz*.

One more modern case of the effect of the mind on the body I will relate as told me by my venerable friend, Dr. Tabb, of Gloucester county, Virginia.

The doctor was a glorious old gentleman, a favorite disciple of Nimrod, in fact he might be called his first mite man. Fox hunting and quail shooting were his favorite amusements. In fact, if he was engaged in a fox chase and was summoned by St. Peter to the gates of Paradise, he would ask the old gentleman to please excuse him a little while until he had caught the fox. One frosty morning he was on his way to see a very sick slave with fever who was, in what he thought, a very critical condition, and just at that time a fox ran across the road with a pack of hounds in full cry. The hunters soon followed, and coming up to the doctor said, come doctor, join the chase with us, we have gotten up a red fox and he will probably run all day. This was more than human nature could stand. A neighboring negro was passing by luckily at the time. Here, Bill, said he, putting his hand in his vest pocket, take this box of pills down to Col. Taylor's plantation and tell Tom to take one every four hours until I see him again. The doctor joined in the chase, consequently did not see the patient until the next day. Walking into his cabin the next morning he discovered the patient much improved, free from fever, cheerful and happy. Well, Tom, said the doctor, how are you to-day? "I feel almost well," said he, "eat a good breakfast dis mornin' and wanted more. It was de fust mouthful I had eat in a week, and was de fust time wictals tasted good to me. In fact, I began to get better in ten minutes after I took one of them things. Nancy tried to make me believe they was 'cussion caps but I knowed you were not a gwine to give me 'cussion caps so I tuck em jes like Bill told me."

The doctor looked wise as doctors usually do under embarrassing circumstances, put his hand mechanically in his vest pocket and found to his horror, Tom's pills, and saw in the hurry and confusion of the chase he had sent him instead a box of percussion caps he had used in shooting quail the day before. Well, Tom, said the doctor, it is a new remedy that has certainly done you good and you have the honor of having taken the first dose in Virginia.

I remarked to the doctor it was no doubt the effect of the mind on the body that had cured his patient. He replied it had taught him a valuable lesson, that he was a thorough disciple of Rush at that time, had bled Tom profusely, put him on an antiphlogistic course of purgatives, and his recovery was due to one of three things: 1st. The effect of the mind on the body. 2d. To the percussion caps. 3d. Stopping my medicine. The latter, said he, I think much the most probable.

A blind reverence for authority should be avoided as furnishing an impediment to modern medical progress for I am thoroughly satisfied that if every book on practice written prior to 1850, was by act of assembly made a public bonfire of, mankind would be greatly the gainer thereby.

In looking over my library last winter, I came across Clutterbuck on blood-letting, and Hamilton on purgatives, and for fear they might fall into the hands of some confiding young student who might regard them as authority and be tempted to follow their life-destroying doctrines, I committed both to the flames. But another I came across which for unique style and originality beat all medical books I ever saw. It was a treatise on new remedies in 1733, written by Dr. John Brickell, a graduate of Trinity College, Dublin. The *materia medica* at that day must have been at a very low ebb, and I think you will concur with me when I tell you some of his infallible remedies.

"A woodpecker's tongue," says he, "dried and used as a toothpick will cure *any* toothache, and a *calcined owl unplucked* taken into the throat will open the quinsy to a marvel."

This book I preserved for its originality, I had but little fear of its misuse, for the young student might possibly cram the throat of his patient with unplucked owl ashes; but I have no fear he would ever use it in his own throat. Nor did I fear an indiscrimi-

nate use of the remedy in his general practice on account of the scarcity of owls at the time they would most probably be needed.

I merely mentioned these facts to show you the influence the mind has on the body and to impress on you the very great importance of impressing your patient with the idea of recovery. Don't enter a sick room with a doleful countenance. Don't make a display of instruments on the table. Don't shake your head ominously and say to a bystander loud enough to be heard by the patient, he is very ill, I am afraid you did not send for me soon enough. Cheer him up, build up his vital powers with the tonics with which our modern dispensatories so abundantly abound. Stimulate, if necessary, and feed with proper food when it is not contra-indicated, but above all things let me entreat you not to enter the field as an ally of the disease with your lancet and drastics. Give God Almighty a chance as Velpeau said, and you will never have cause to regret it. It is said in holy writ: "Wisdom is the principal thing, therefore get wisdom but in all thy gettings get understanding."

SURGICAL NOTES.*

By ROBERT BATTEY, M. D., Rome, Ga.

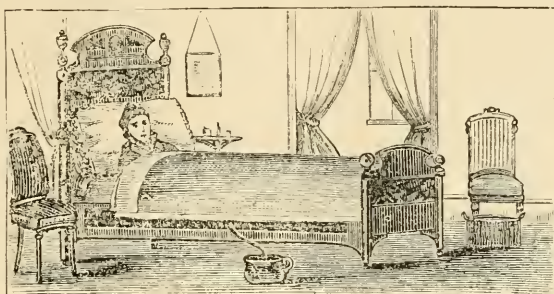
A NEW CATHETER.

The instrument exhibited to the Association has been christened by the manufacturers, (Sheppard and Dudley, of New York) Battey's Universal Syphon Catheter. It is, as will be seen, nothing more than the soft-rubber catheter of Nélaton, extended to a length of four feet, instead of fifteen inches.

When introduced into the bladder, the patient being in a reclining position, it forms a true syphon and conducts the urine into a re-

*This paper was prepared for the last session of the Medical Association of Georgia; but was not presented by reason of the providential absence of the writer.

ceptacle upon the floor until the bladder is emptied. When the catheter is withdrawn, the moment its eye leaves the urethra, by reason of its syphon action, (the weight of the column of urine



still in the instrument,) air enters and the last remnant of urine passes safely into the receptacle, not a single drop falling upon the bedding or clothing of the patient.

To every one who has experience in manipulating the female catheter and a receiving vessel, beneath the bed-covering, with all of its awkwardness and accidents, the advantages of the syphon action of the new instrument will be sufficiently manifest.

In atonic state of the bladder the syphon empties the viscus without need of assistance by either vesical contraction or external compression.

The action of the syphon comes into useful play, also, in the readiness with which the interior of the instrument is cleansed. The operator, after washing his hands, coils the catheter in the water to fill its channel with liquid and, seizing the end firmly between the thumb and finger, acting as a pinch-cock, draws it over the edge of the basin. The syphon is thus established and discharges the water from the basin into a receptacle below, rapidly and completely cleansing the instrument.

It is termed also a universal catheter, and in a sense it is such. It is equally available for the male and female, and, when of rather small size, equally available, too, for adults and children; excepting, of course, very small children, who but rarely require catheterism. So soft and flexible is it, it easily passes an enlarged prostate, or worries its way through a tortuous urethra where any other catheter can be made to go.

I need scarcely say that the instrument is not patented but open, both for manufacture and sale, to everybody.

A NEW PERINEAL RETRACTOR.

In the vaginal ovariectomy of Thomas, and in Battey's operation by the vaginal section, the speculum of Sims, as usually constructed, is found deficient in several particulars: 1st. The blade is too long, passing so high up into the canal as to leave us room for the incision in the vaginal cul-de-sac. 2d. It is too much cupped, the edges extending around upon the vaginal wall in such manner as to interfere with the free use of the exploring finger and requisite instruments. 3d. The blade is placed at nearly a right angle with the shaft so that, when the hand of the assistant, holding the speculum, is kept well out of the way of the operator, the point of the blade is thrown so far forwards in the vagina as to interfere with the manipulation. 4th. In these long and tedious operations the handle of the speculum becomes very tiresome to the hand of the holder.

To remedy these defects the writer has devised, and one of his own sons has constructed, the instrument now exhibited. It will be seen that the blade is quite short, measuring only two and three tenths inches in length. Its width is one and three-tenths inch, and the dish of the blade is but three-tenths inch. The inclination of the blade towards the shaft forms quite an acute angle, of forty-five degrees. The handle is of wood, of good size so as to be easily held in the hand, and studded with small diamond-shaped corrugations to give a secure hold.

When in position the blade of the speculum passes the posterior wall of the vagina well back into the hollow of the sacrum, out of the way of the operator, whilst at the same time the hand of the assistant lies against the dorsum of the sacrum, out of the way also.

With Sim's instrument the attention of the assistant must be constantly directed to your points, namely: 1st. To keep the speculum pressed into the vagina. 2d. To steadily retract the perineum. 3d. To keep the point of the blade well back towards the rectum. 4th. To keep his own hand out of the way. To fill these four indications well throughout a protracted operation is no easy task. The form of the new retractor is such that all four of the indica-

tions are amply fulfilled in the one single movement of longitudinal traction upon the instrument. This alone keeps the blade firmly fixed in the vagina, with the point well back upon the rectum, dilates the vaginal orifice, and compels the holding hand to keep its place close to the sacrum.

The rubber tube, with sharpened hook attached, as shown, may often be advantageously substituted for the hand of an assistant and renders the instrument completely self-retaining.

This perineal retractor has been repeatedly used in practice and has proven itself to be a valuable auxiliary in the difficult, and sometimes very embarrassing, operations mentioned. It has also been employed for general gynecological uses, as a substitute for the Sim's speculum, and with much satisfaction.

A NOTE ON SURGEONS SPONGES.

The sponge of the surgeon is proverbially a vehicle for transporting the germs of pyæmia, septicæmia, hospital gangrene, etc., from one patient to another. So important is this source of infection regarded it is the practice to-day in many hospitals entirely to exclude the sponge, as a cleansing agent from the surgical wards. Ovariologists often insist upon the employment of *new* sponges to be used but once is an item of some importance, and any ready means by which they may be cheaply renovated and thoroughly disinfected so as to be safely used time and again cannot fail to be of interest. But it is not alone a question of economy, for new sponges always contain sand and more or less calcareous matter which must be carefully removed before they are used for surgical purposes, and are always liable to contain septic germs which necessitates thorough disinfection. One who has conducted the cleansing of new sponges with a watchful eye need not be told how difficult it is to remove sand and impurities completely. It is thus a matter of question whether with proper system and care old sponges, long in use, cannot be as easily rendered fit for surgical uses as could new ones fresh from the druggist. Old sponges are more completely free from grit than it is possible to render new ones by any reasonable amount of washing and preparation. Old sponges, too, acquire an increased softness by use which commends them to the surgeon. Dr. Keith, of Edinburgh, who has achieved

the highest success in ovariectomy of any living man, prefers in that operation old sponges to the new, when they are properly prepared.

The writer has instituted a series of experiments with various detergent and disinfectant solutions upon old, soiled sponges, keeping in view the two-fold object of removing blood and septic material.

Animal poisons differ from vegetable poisons in that, for the most part, the former are acid in their reaction, whilst the latter are chiefly alkaline or alkaloidal. Ammonia has been found to be an efficient antidote for most of the animal poisons, and it is likewise one of the best of our solvents for coagulated fibrine, both in the living organism and in the chemist's beaker glass. In the experiments alluded to, weak solutions of ammonia have given the most excellent results, and solutions of carbolic acid the most unsatisfactory. The latter agent coagulates albumen of the blood and tends to harden and fix the impurities in the meshes of the sponges, and it renders them harsh and stiff also. Ammonia dissolves the albumen, neutralizes and dissolves out acid septic poisons, softening and cleansing the sponges most completely.

A good working formula is one ounce of officinal aqua ammonia to a quart of water. Three wide-mouth bottles, with glass stoppers, are filled with the dilute ammonia and numbered 1, 2, 3.

The soiled sponges are well washed out in cold water and placed in bottle number 1 for twenty-four hours. They are again well-washed in cold water and placed in number 2 for another day, when they are re-washed and transferred to number 3 to remain and macerate until wanted for use. The solution in the first bottle is thrown away and the bottle renewed to become number 3 in the series at the next cleansing of sponges.

The sponges shown have seen much service and have been repeatedly subjected to this process of cleansing and disinfection. As will be seen they are entirely free of any impurity or stain visible to the eye, and are thoroughly inodorous. In fact, they are as absolutely clean as a sponge can be made.

CLINICAL LECTURE ON SURGERY.

By R. A. KINLOCH, M. D., October 19th, 1880.

Professor of Surgery Medical College of the State of South Carolina.

Reported by THEODORE N. DUBOSE, Medical Student.

GUNSHOT INJURY OF TIBIA—NECROSIS—OPERATION.

GENTLEMEN :—The patient, whom you see before you, has received a surgical injury of the left lower extremity, implicating the tibia, and, as you see, there is considerable angular deformity of the limb. This is the result of a gunshot wound. He was shot with a rifle, the ball entering the anterior part of the leg and making its exit behind, shattering the tibia, as it appears. You perceive this fistulous opening. The man can't stand upon the limb, and in consequence of the contraction of the gastrocnemius and soleus muscles, he cannot place his heel on the floor—is what we term “club-footed.” A thin pus is constantly discharged from this fistula, and in passing a probe into the wound, I find it sinks to some extent, but push further and I come in contact with particles of bone, which prevent the wound from closing up. The bone, on account of the injury is “necrosed,” and there are undoubtedly spiculæ of bone which are constantly being exfoliated, and it is impossible for the wound to heal until we get rid of this bone. Again, the soft parts, in healing, may catch this necrosed bone, and retain it, making the fistulous opening you see. Before operating, it is best as far as possible, to get all of the blood out of the limb; to do this, we elevate the limb and apply Esmarch's bandage, thereby detaining the blood above the point where we wish to operate. This bandage is particularly useful in operating upon necrosed bone as hemorrhage is very apt to occur. In feeling the limb I detect towards the posterior part a little hard mass, bone, perhaps, which may in time be absorbed, or may be a portion of lead but I will leave that for the present. Make an incision with a scalpel, cutting above and below the fistulous opening. The anterior tibial is out of the way and there are no important vessels that are likely to be cut. Then with this blunt pointed instrument, we separate the muscles from the bone. We next insert the forceps to draw out any loose pieces of bone that we can find; and we have found *seven pieces* of

necrosed bone. Sometimes you have to sacrifice living bone in order to get at the necrosed, but always spare the living bone as much as possible. It is better to operate two or three times than sacrifice too much of the living bone.

When you detect any rough portion or sharp edge in the wound, it is always best to take a "gonge" or the bone nippers, and round the edges as much as possible to prevent irritation to the soft parts. Always pull out all of the dead bone that you can feel; and very small particles that may be left, may in time be thrown off. But the wound as it stands has to suppurate, and the matter has to run "up hill," and in such cases you have either to make a counter-opening or direct that the wound be syringed out carefully every day. As we cannot in this case make a counter-opening we will use a carbolized tent and direct that the wound be carefully syringed every day. I will now cut down upon the supposed spiculæ of bone at the back of leg. It is not bone as we rather supposed, but a piece of the bullet. This shows that bullets may be broken by coming in contact with bone. We might have to operate upon this patient again. The operation is bloodless on account of the bandage used; but should hemorrhage occur we have simply to plug up the wound. Now, in regard to the posterior wound, unite the edges with adhesive plaster and allow it to heal by the "first intention." As to the anterior wound, that must be left open and treated with carbolized oil. (Carbolic acid 1 to 8 or 10 parts of oil). The patient must be kept in bed. We will give him an opiate to relieve pain. Notice the condition of this dead bone, it presents a worm-eaten condition and is of a tawny, yellowish hue. Dead bone covered by living bone undergoes partial absorption by the granulations of the living bone. Again, dead bone is sometimes black, this is due to septic gases. The entire length of the *shaft* of a bone may become necrosed from traumatic injury, but never the entire bone.

LECTURE SECOND—OCTOBER 22, 1880. REPORTED BY J. L. DAWSON, JR., MEDICAL STUDENT.

The first case brought before us to-day, is a gentleman from the country, suffering from a tumor involving the right side of the inferior maxilla, as high as the ramus, and the adjacent parts of the neck.

The external examination shows that the tumor is a semi-solid fluctuating mass, which has a marked tendency to ulceration. On looking inside of the mouth, one tooth is found to have fallen out, and another is loose. Pain in the part is continuous and prevents sleep. About twelve months ago he had an epithelial cancer removed from the right side of his lip, soon after which this tumor appeared. The patient, previous to this trouble, was healthy and robust, but of late has been losing flesh and strength.

From this history and the examination of the case, we are led to conclude that we have to deal with a tumor of the so-called malignant type.

The diagnosis of a tumor is often obscure, for we are frequently unable to determine the precise nature of the disease, with which we have to contend.

Tumors have been commonly classed under two heads, simple and malignant, and each of these subdivided into many particular heads. Simple tumors yield to treatment, and as they do not concern us in this case they will not be considered at present. The malignant are characterized by their rapid growth, the large size which they attain, the general constitutional disturbance which accompanies them, infecting the system, and their occurrence even after entire extirpation. Many of these features are exhibited in the case before you. The general name of cancer has been given to this class of tumors, but sarcoma in the modern use of this term often implies great malignancy, and a sarcoma cannot always be clinically distinguished from cancer.

This patient tells us that he has had an epithelial growth; now of all the forms of cancer, this is the most amenable to treatment, though when it attacks certain parts, as the tongue and the pharynx, it is very fatal. But let us return to the tumor now before us; it originated (according to his surgeon) in the sub-maxillary gland and not in the bony tissue of the jaw.

I do not advocate generally the removal of malignant growths, because the probability of their reappearing is very great. Besides this, in the present case, the disease seems to involve or to be blended with the great vessels of the neck. The patient's doom is sealed. He must inevitably succumb to the ravages of the disease. Death may result, from hemorrhage by erosion of the large vessels

of the neck, or from the implication of some more vital part, or he may sink from exhaustion, the system giving way under this wasting disease.

Anodynes should be given to alleviate pain and insure rest. In a case of this nature, opium may be given with perfect freedom. The external treatment should consist in keeping the parts clean with an antiseptic wash, such as carbolized water, or an ointment of iodoform would answer the purpose as well. Our treatment, therefore, can and will be only palliative.

The next patient I bring before you is a young woman, with an injury of the elbow-joint, which occurred six or eight weeks ago. The joint is fixed with the arm in the extended position. This joint is a perfect hinge-joint, and is quite complex in its arrangement. The numerous angles and processes that it presents are often fractured. It is highly important that the anatomy of this part should be thoroughly understood, for after an injury, the joint swells immoderately, making a diagnosis difficult and obscure, even when seen immediately after the accident.

The lower end of the humerus is often the seat of fracture. Either condyle may be broken, a **V** shaped fissure running between the condyles into the joint, or a transverse fracture may happen, either above or below the condyles. With respect to the fracture of these condyles, their abnormal position as compared with those of the sound limb, or the detection of crepitus, when the swelling will allow, are the means by which the diagnosis is made. In the transverse fracture, the bones of the fore-arm with the fragments may be displaced backward, or, as it were, the humerus forward. This fracture resembles, and is often confounded with dislocation, but can be easily distinguished by the facility with which reduction is effected, crepitus and the measurement from the olecranon to the internal or external condyle, the distance being natural in the fracture but increased in dislocation. However, when, (as in this case) six weeks have elapsed, we can scarcely say what was the nature of the injury.

When this joint is apt to become ankylosed, we should always put it in the flexed position; for in this position it is infinitely more useful to the patient.

In looking at the case before us, we find that the power of pron-

tion and supination is not interfered with, therefore, there could have been no injury to the radio-ulnar articulation. The head of the radius is a little more prominent than natural, but this is so slight, that no importance should be attached to it. The internal condyle of the humerus is lower than it should be and there is considerable thickening about the joint. These facts point to a complicated fracture of the lower end of the humerus; callous has been thrown out and the fragments have united in a bad position, thereby fixing the joint. There may also be some contraction of the triceps muscle. The treatment will consist in rupturing the ligaments, breaking up the adhesions and any callus which interferes, flexing the arm and trying to secure the parts in a more useful position.

In these elbow injuries always caution your patients that there will be some deformity or else you will be blamed. If we succeed in flexing the arm, an apparatus that will keep it flexed must be applied. This indication may be met by a rectangular splint, made of wood, or what I prefer and shall use in this case, an ordinary rectangular gutter pasteboard splint. Where very little swelling is anticipated, some surgeons use the plaster-of-Paris bandage.

The patient being now anæsthetized, I proceed to perform the operation above indicated. The limb is thus forcibly flexed, and I can feel the adhesions yielding. I now have the arm at a right angle and shall apply the splint. When inordinate swelling is expected, the joint may be surrounded with bladders of ice; but here perfect rest, I think, will suffice, and I will put the arm up in this gutter splint of pasteboard well padded with cotton batting. The apparatus is put on loosely and the limb carefully watched. If I find that the swelling becomes so great as to interfere with circulation, the splint will be removed at once. The patient will be put to bed and perfect rest insured by morphine, which will also serve the purpose of alleviating pain. If the operation succeeds, the limb will be less in her way, and of much greater use.

This patient was again before the class seven days after the above operation. Swelling had very much subsided, but little suffering had been endured. There was considerable power of flexion and extension, with perfect pronation and supination. Subsequent treatment consisted of rest, the continued use of the guttersplint, but passive motion was to be practiced every other day and carefully increased. The result was quite satisfactory.

CASE OF DIFFUSE ANEURISM OF THE ORBIT.

Reported by J. A. SEXTON, M. D., Raleigh, N. C.

Read before the North Carolina Medical Society, at the 28th Annual Meeting, held at Asheville, June 2d, 1881.

Mrs. Jenny ———, primipara, æt. 25. General health good, of rather full habit and sanguine temperament. Has been subject to attacks of nervous headache for ten years, with sometimes very great cephalic congestion. About seventh month of pregnancy noticed a sensation of fulness in the head and eyes—eyes feeling like they were swollen especially the left, in which there was so much of this sensation that she would frequently have her nurse examine to see if it was perceptible. Stooping or even looking downward would produce vertigo, and great tension of left eye. There was impairment of sight, objects at a distance were hazy and indistinct, with inability to measure distance, giving her very much the inaccurate step of locomotor ataxia. She occasionally noticed a slight purring noise with a rushing sensation in the eye, was listless, sleepy, and in condition of constant lassitude.

On February 27th, eight and a half months in pregnancy, and while suffering from general cold. She had an attack of intensely painful neuralgia affecting the left side of the face, teeth, and eye. Later in the day, she had for some hours, incessant vomiting and retching and describes herself as being very bilious. After the vomiting had exhausted itself and the pain had almost subsided and while sitting quietly before the fire, she felt a loud snap which she compared to the report of a gun and was referred to the left upper posterior tooth. This was immediately followed by a loud whirring noise, pulsatory and distributed to the whole side of temple, eye, and ear, but most intense in the ear. Pain of a sharp throbbing character returned in the eye and teeth, and continued unabated except when quieted with morphia. The eye soon began to swell and in a few hours presented an immense exophthalmos, with blue tortuous veins of upper, and great chemosis of lower lids. The sight, however, remained almost as good as before.

Her accouchment occurred March 3d, when she was delivered of a healthy child weighing eight pounds. After this, the pain and

general discomfort were more amenable to treatment but the prominence of the eye and the loud whirring sound continued unchanged. Upon palpation, the tumor was soft and pulsatory, and the rasping bruit of aneurism distinctly heard with the naked ear or stethoscope applied to forehead, temple or eye. The ordinary bruit was supplemented by the muffled diffuse rushing sound characteristic of the cellular invasion. Upon compression of the carotid there was marked subsidence of the tumor and entire cessation of the bruit, giving the patient great comfort.

In consultation with Dr. R. H. Lewis it was determined to adopt the intermittent pressure treatment, with the auxiliaries, iodide, potassium, and the slowing of the heart's action with veratrum viride, purgatives, low diet and the constant recumbent posture. This course was persisted in faithfully for one week when quite a large vessel gave way and bled profusely. The hemorrhage, however, was controlled by constant compression of the carotid for forty-five minutes. Having gained no appreciable benefit from this course of treatment and in view of the threatening hemorrhage which had been more than once repeated, the ligation of the common carotid was determined upon. But as there was a considerable soreness at the point of pressure and an unsatisfactory amount of nervous excitability, the operation was deferred until the soreness would have subsided and the nervous system regain its accustomed equilibrium.

Preparatory to the operation a further consultation was held with Drs. Lewis, Hines, McKee and Knox, when in view of the great gravity of the operation, and the fact that a few cases had been cured by constant pressure, it was decided to give the patient this, the last possible effort before operating. Accordingly this plan was instituted, these gentlemen kindly taking relays in order that the treatment should be thoroughly carried out. At the end of five hours the pressure became such absolute torture that it had to be abandoned. Two days after this the operation of tying the common carotid was satisfactorily performed. Thirty minutes after the completion of the operation and after the patient had been put comfortably in bed, the most alarming symptoms of anæmia of the brain were manifested. Deep sighing, respiration came on with constant effort to clear the throat of mucus, the countenance was

pale and most painfully anxious, pupils widely dilated, pulse rapid, feeble, and irregular, but not the slightest convulsive movement. The foot of the bed was at once elevated to about 30 degrees, whiskey injected under the skin, and a current of electricity kept up constantly in the course of the phrenic nerve. But the most marked and gratifying effects of the action of nitre of amyl in counteracting cerebral anæmia were exhibited. The second or third inspiration would invariably suffuse the face, improve the breathing, and the pulse would become full, regular and much less frequent reducing it in one minute from 140 to 110. These alarming symptoms soon passed off and the patient made a good recovery. The ligature came away on the twelfth day without the slightest hemorrhage. Six days after the operation the bruit returned, but had lost its muffled character and was high pitched and musical. It has continued with variable distinctness, though for the last week has diminished perceptibly from day to day. The establishment of the collateral circulation was indexed by the difference of temperature in the two sides, twenty-four hours after the operation there was a difference of one degree, the thermometer being placed in the mouth outside the teeth. This difference has grown less from day to day until now, five weeks after the operation, there is only one-eighth degree difference. Two weeks after the operation, the cornea gave way in consequence of impaired nutrition, but is now in process of cicatrization. The ball has resumed very nearly its natural prominence, but there is still some chemosis of the lower lid.

In this case a true aneurism of the ophthalmic artery existed for some time before the rupture took place, and had it been recognized and the proper means of preventing undue arterial tension adopted, the grave condition of diffuse aneurism might have been avoided. It is to be hoped that this case will serve to call the attention of the profession to the great importance of promptly relieving excessive arterial excitement in pregnant women, and thus avoid this unfortunate accident which is almost peculiar to that state.

Further progress of this case will be reported through the NORTH CAROLINA MEDICAL JOURNAL.

REVIEWS AND BOOK NOTICES.

ANATOMICAL STUDIES UPON THE BRAINS OF CRIMINALS. A Contribution to Anthropology, Medicine, Jurisprudence and Psychology. By MORIZ BENEDIKT, Professor at Vienna. Translated from the German by E. P. FOWLER, M. D. New York: Wm. Wood & Co. 1881. Pp. 185.

The author says in his dedication that his work is a contribution towards the natural history of crime.

In the olden times it was a received dogma that man thinks, feels, and acts, according to the anatomical construction and physiological development of his brain. The advance of general science, the founding of craniology by Blumenbach, and the interest which Gall succeeded in arousing by his studies of the anatomy of the brain, gave a new impulse to this dogma.

It is quite proper to ascertain in this connection, the author thinks whether that remarkable class of mankind which represents the real essentials of criminality, does not furnish data which testify in favor of the proposition mentioned.

"An inability to restrain themselves from the repetition of a crime, notwithstanding the full appreciation of the superior power of the law (Society), and a lack of the sentiment of wrong, though with a clear perception of it, constitutes the two principal psychological characteristics of that class to which belongs more than one-half of condemned criminals." * * *

"The accompanying contribution upon the cerebral constitution of criminals exhibits mainly, deficiency—deficient gyrus development—and a consequent excess of fissure, which obviously are fundamental defects." * * * "Crime is in no way analogous to monomania; it results from the psychical organization as a unit, and its particular form of expression is determined by social circumstances."

We see in this book the kernel of a new science, which promises to give professional witnesses a new foundation for opinions having a quasi-scientific basis, and which if carried out to its legitimate end, means: we hope to be able to show you that there are certain constant defects in certain brains, which predispose men to be criminals, and nothing is lacking but the austerity of society (that is,

the law) to bring about an open manifestation of crime, utterly beyond the power of the unfortunate person possessing such a brain, to resist.

Such a tendency is much to be deprecated. It is well enough to pursue the anatomy and pathology, of the brain of human beings and learn all we can, but the grouping of brains of criminals together even though they should show the same anatomical defects, should not tempt us to draw the inference that criminals are irresistibly criminals and should be educated out of this debased condition, as a matter of justice. We do not charge the author with the positive enunciation of such principles, but this is the tendency of the book.

The question with thinking men in these days of mock-merey towards criminals, is: How can a State effectually execute laws against criminals, and protect society, when the great mass of jurors are opposed to criminal punishment, and are so easily swayed by the testimony of the so-called scientific experts? It is too easy to forget the homely phrase of the old English indictment "not having the fear of God before his eyes, being moved and instigated by the devil."

This book deserves careful study, and the reader will be drawn into it easily by the ample illustrations. It is very likely too, that he may not draw deductions which we have here offered.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M. D. With 112 illustrations. Seventh Edition, re-written enlarged and improved. New York: D. Appleton & Co., 1, 3 and 5 Bond Street. 1881. Pp. 929. 8vo. Cloth.

A comparison of the first with the seventh edition of this work shows a large increase in the number of pages, and this increase notwithstanding the author has left out the article on insanity. The size of the pages has been enlarged and a smaller type used.

Dr. Hammond's first book was the pioneer systematic American treatise on diseases of the nervous system. Since thence in Germany, France, England and America, many volumes have appeared, and the whole subject of the pathology of the nervous system has been far advanced, and the physiology of the subject has kept pace with it

The introduction of this volume is devoted to the description of instruments used in diagnosis and treatment. The first section is devoted to Diseases of the Brain, the second to Diseases of the Spinal Cord, the third to Cerebro-Spinal Diseases, the fourth to Diseases of the Peripheral Nervous System, the fifth to Diseases of the Sympathetic Nervous System, the sixth to Toxic Diseases of the Nervous System. Of the 112 illustrations 56 are by the author.

A careful examination shows this to be essentially a new volume, and the rewriting and remodelling having wrought such changes, that it will be consulted with an increased degree of confidence by general practitioners.

While all subjects of the most complex character are treated in detail as to pathology, diagnosis and clinical history, the practical details of treatment are not neglected. Taking the subject of chorea for example, twelve pages are devoted to the symptoms, (under which is included the history of the remarkable "epidemics" of the diseases), causes, the diagnosis and prognosis, and the morbid anatomy and pathology.

Turning to the treatment we make the following extract :

Zinc in the form of sulphate is more used in this country than any other remedy. The author's preference used to be for the sulphate, which he gave in gradually increasing doses, from two or three grains up to 20 or 30, dissolved in a sufficient quantity of water, to prevent gastric irritation. Latterly he has employed the bromide of zinc with even better results. Ten drops of a solution of the salt, consisting of a drachm to the ounce of syrup or water, may be given three times a day as an initial dose, the quantity being gradually increased as rapidly as the stomach will bear. When the choreic symptoms begin to disappear, the medicine should be decreased in the same gradual way.

He finds the primary galvanic and the induced currents inefficacious, except in those forms in which there is distinct paralysis.

Of the benefits of arsenic given hypodermically, in the form of Fowler's solution, no one who has tried can have any doubt. For a child of five or six years the initial dose may be four drops of the solution three times a day for the first day ; for the next day, three drops are given at a dose ; for the next, four, and so on until there are evidences of its toxic influence, such as nausea and vomiting,

and puffiness of the face, especially under the eyes. The matter about which one must be guarded in administering Fowler's solution hypodermically is the production of abscesses. A point must be selected where the skin is loosely attached to the subjacent tissues. The best point is on the front of the forearm, midway between the wrist and the bend of the elbow. The hypodermic dose of arsenic may be considerably larger than that which the stomach will ordinarily tolerate. He has often carried the amount of arsenic to the utmost bounds of prudence by the mouth, and then continued it in larger doses by hypodermic injection.—Pages 745-6.

Dr. Hammond's work is sufficiently well known not to require of us an extended analysis of its contents, but this edition is so essentially altered from the first, that those who have only the first edition will not fail to get the last, and those of our readers who do not possess it could not do better than to add it to their libraries.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Vol. II. BERLIOZ—CHOLAS. Washington: Government Printing Office. 1881. 4to. Pp. 990.

When the first volume made its appearance we gave an account of the general scope of the work. Although many readers of that volume already aware of its magnitude, and its great accuracy, the wonder does not cease that such a work should have been attempted, with any hope of completion.

Dr. Billings, the able librarian of the immense collection of which those volumes are the key, says in his letter to the Surgeon-General :

"This volume includes 12,459 authorities, representing 4,934 and 2,810 pamphlets. It also includes 11,550 subject-titles of separate books and pamphlets, and 37,310 titles of articles in periodicals."

Dr. Billings acknowledges his indebtedness to Charles Rice, Ph. D., the polyglott scholar, and Chairman of Committee of Revision of the U. S. Pharmacopœia, "for valuable aid in reading the proofs of this volume."

Under the title "Blood" and "Blood-Letting," over 50 double-column pages are covered, and a very large number of regular treatises and journal articles are indexed.

No such work exists in any language and it does great honor to American medical literature.

We wish here to acknowledge our share of indebtedness, for the impetus which has emanated from the Surgeon-General's office in all matters appertaining to medical study and research.

ANATOMICAL PLATES. Arranged as a Companion Volume for the Essentials of Anatomy, and for all works upon Descriptive Anatomy. Comprising 439 Designs on Steel by Prof. J. N. MASSE, of Paris, and Numerous Diagrammatic Cuts Selected or Designed by the Editor, Together with Explanatory Letter-Press. Edited with Revisions, from the Original Translation of Prof. Granville Sharp Pattison. By AMBROSE L. RANNEY, A. M., M. D. New York: G. P. Putnam & Sons, 27 and 29 West Twenty-Third Street.

This is a handsome octavo volume of re-produced plates, long familiar to the American physician. The title page explains the scope of the work. The publishers have found it necessary to explain that "A larger part of the Preface should be accredited to the late Prof. Pattison, a former editor of these plates, to whom due credit has been omitted by an oversight on the part of the present editor." This oversight does not at all impair the beauty of the plates, and medical students can easily afford to buy the volume at the low rate at which it is issued by the publishers.

HYGIENE AND TREATMENT OF CATARRH. THERAPEUTIC AND OPERATIVE MEASURES FOR CHRONIC CATARRHAL INFLAMMATION OF THE NOSE, THROAT AND EARS. Forty illustrations. Part II. By THOMAS F. RUMBOLD, M. D. St. Louis: Geo F. Rumbold & Co. 1881. 8vo. Pp. 298.

This volume is a continuation of the subject of catarrh, noticed by us on a former occasion. The two volumes together, while they seem to be unnecessarily diffuse, are without doubt, meritorious. The author evidently writes from a large personal experience. To a

general practitioner not used to paraphernalia of a specialist's office, the sight of the frontispiece—the operating table of the author—must strike him with the importance of the subject of catarrh, and at the same time discourage him from even effectually grappling with this disorder.

We must say we have read the volumes with much interest and profit, not the least attractive feature being the striking individuality of the work.

ATLAS OF GYNECOLOGY AND OBSTETRICS. Edited by Dr. A. MARTIN, Professor of Gynecology in the University of Berlin. Containing 475 black, and 37 colored illustrations from the original designs from 91 authors. Supplemented by numerous illustrations from J. P. MAYGRIER's *Nouvelles Demonstrations d'Accouchments*. A. E. Wilde & Co., Publishers, Cincinnati, Ohio.

This work is issued in fifteen parts, each part containing four elegant plates with numerous figures in each plate and four pages of explanatory text. The size of the atlas is elephant folio, and the price of each part is astonishingly low at \$1.00.

The rapidity with which book after book comes forward claiming the attention of the physician, it is embarrassing to know which to select and which to reject. In the department of Obstetrics and Diseases of Women, there are many excellent volumes, but there is room for a good atlas of plates, illustrating these subjects. This is a valuable work for reference and study, and will be a welcome volume upon the table of the physician, when it is completed. The parts are not sold separately and subscriptions are received only for the entire work.

If we can judge the work by the four parts before us, we can unhesitatingly recommend it to our readers.

HERBARIUM PHARMACEUTICUM ODER DIE OFFICINELLEN PFLANZEN DER DEUTSCHEN FLORA IN GETROCKNETEN EXAMPLAREN. Von DR. DAVID DIETRICH. Jena, 1877.

This is a small herbarium of plants of the German pharmacopœia, comprising 311 species. They are neatly mounted on double sheets of manilla paper, each sheet containing from one to four plants labelled on the first page, the specimen secured by gummed strips

of paper on the third page. The whole is contained in a portfolio.

Here is a suggestion now for some enterprising physician or pharmacist to follow. The medicinal flora of the United States could be easily mounted in this way, at little expense. The old medical botanies are now all but inaccessible except in the best libraries, and they are deficient in many plants now recognized by our pharmacopœia.

The most glaring defect in the education of physicians of a recent date, in this country, is in pharmacognosy and therapeutics. A study of the characters of medicinal plants is a necessary accomplishment, and fits the one acquiring the knowledge for a more thorough understanding of the higher grades of his profession. We trust that some one of the bright young physicians recently licensed at Asheville will make a study of medical botany, and at least bring together the medicinal plants of the State.

JONES' CHEMICAL VADE MECUM FOR MEDICAL STUDENTS. Intended as a Refresher to the Memory upon the more Important Facts in Chemical Science. By GEORGE JONES, F. C. S. London: Henry Kimpton, High Holborn. 1881. Pp. 87.

This little work is intended merely as a help to memory and for reference, the author has purposely abridged the volume by touching upon leading facts of medical interest. The rarer elements have been purposely omitted for the same reason, the whole forming a basis for examinations.

Mulier.—In reading a recent medical address we found a quotation from "*Mulier*"—probably a mistake for Molière, though really the idea conveyed in the words quoted is essentially Montaigne's—our thoughts turned to one of the many good things in Guy Patin's delightful letters. Guy Patin was a doctor, and of course a gentleman and could not have made such an ungallant remark as to woman; but he quotes "*Monsieur de Villeroy, the great Secretary of State, who has a bad wife (he is not the only one, the race is not dead),*" as asserting, "*In Latin, woman was mulier, that is to say, mule hier, mule demain, mule toujours.*"—*American Practitioner.*

DR. JAMES A. MILLER.

We regret to announce the death of our esteemed friend, Dr. James A. Miller, formerly a practitioner in this city.

At the breaking out of the war he was commissioned surgeon, receiving one of the first commissions issued by the State.

His association as medical officer for a regiment of raw troops, the 18th N. C. Infantry, developed an excellent ability in the management not only of the sick, but of camp hygiene. Military surgery was a new art in this country when he entered upon it, but so assiduous was his attention to his new work, that the young physician, in civil practice had barely gained a recognition from his seniors, became now distinguished for his knowledge and tact.

Dr. Miller had served as a private previous to his promotion; he had shared with the men he was now to supervise as medical officer, in their monotonous and sometimes arduous camp duties, and was for this reason better fitted to direct them. Notwithstanding he had had phthisis as was evidenced by a large cicatricial contraction of walls of the thorax, and his respiration was materially diminished, in camp and field he was active, punctual and efficient.

He went through the severe campaigns of the "Seven Day's Battle," "Cedar Mountain," "Second Manassas," "Sharpsburg" and other battles of the war, serving as Senior Surgeon of Brigade, first under Gen. Branch and afterwards under Gen. Lane, all the time developing in executive ability and operative skill.

His memory is held very dear by the scores of wounded North Carolinians who were the recipients of his kindly offices.

"Dry Tapping" of the Heart.—Dr. Jcs. W. Hunt reports a case in the *Lancet* of an attempt to tap an apparently dropsical heart. After the aspirating needle was passed in, no fluid came but a little blood, the case proving to be an enlargement of the heart, the organ extending from the right border of the sternum to the left nipple, and the top of the sternum. No bad symptom followed the puncture. He died seven days after with cardiac failure, and the signs of the needle were traced in the autopsy.

CURRENT NOTES.

In the treatment of the summer diseases of children, Lactopeptin is almost a necessity. It enters largely into the prescriptions of scores of physicians who wonder now they ever got along without it.

A Fifty-Cell Battery Restores a Patient Apparently Dead from Chloroform.—The *Lancet* reports a case of almost fatal anesthesia from chloroform was restored by the accidental application of a 50-cell battery, after artificial respiration was about to fail.

La Union Médica is the name of a new medical journal published in Caracas, Venezuela. It is issued twice a month, under the editorial management of Doctor Adolfe Frydensberg, and Doctor Antonio Ramella.

Piscatorial.—Doctor, who is off on a little fishing excursion, to his assistant: "Tell everybody I am off to the country in attendance upon a bad case." "But patients are so curious," was the response, "what shall I say of the case; give it a name." "Well, call it, let me see—yes, call it a case of *ichthyosis*."—*Cincinnati Lancet and Clinic*.

The University of North Carolina.—It is a matter of congratulation for Carolinians that our University has shown such increasing vigor in the last few years. Liberal patronage will place it upon a secure foundation, and it deserves a success commensurate with the great ability which President Battle brings to his work.

A Hint to Chloroformists.—Dr. Paggi in London *Lancet* for August (American Edition) says that in a case of anesthesia by chloroform, for an operation performed by Dr. Labbé, respiration and circulation stopped suddenly, as shown by the cessation of bleeding from the lips of the wound.

The mouth was cleansed from mucus, the tongue drawn forwards, the patient's head thrown well back, and artificial respiration continued without avail for *ten minutes*. Dr. Labbé then took a large cloth dipped in boiling water and applied to the region of the heart. Instantly the heart began to beat.

The International Medical Congress will assemble in London 2d to 9th of August. Dr. Jas. M. Toner, of Washington, D. C., and Dr. N. J. Pittman, of Tarborough, N. C., sail about the 13th July. Dr. Pittman is a delegate from the Medical Society of North Carolina and of the American Medical Association. These gentlemen also intend attending the meeting of the British Medical Association, Isle of Wight.

Listerine.—We decidedly object to preparation with proprietary names, but here is one which in spite of us, has won our confidence. It has had a fair trial in our hands in the lying-in chamber, and in dressing wounds, and it overcomes all odors. The published formula shows it to be composed of thymol, eucalyptol, baptisia, gaultheria, and horse mint, besides each fluid drachm contains two grs. of refined benzo-boracic acid.

In a case of exceedingly offensive ulceration of the genitals and rectum, the odor was entirely conquered by the use of listerine.

Vocal Apparatus of the Alligator.—Dr. C. Seiler, during his recent stay in Florida, had occasion to examine the vocal apparatus of the alligator. To his surprise, in almost every instance there was more or less ulceration of the epiglottis, etc., in some cases amounting even to the total destruction of this structure. He had discovered that these lesions were due to a small variety of leech abounding in the Florida rivers. In some instances he had detached these creatures *in situ*, and the surfaces left upon their detachment were so exactly similar to those seen in the other supposed specimens of ulceration, that he was compelled to conclude that all were due to the same cause, viz., leech-bites.—*Philadelphia Medical Times*.

The Marine Hospital Service in California.—We notice a report of a Committee of the Medical Society of California in the *Southern Clinic* of June, which is a bitter and absurd opposition to a government institution which has been carefully and economically administered, and has given aid to hundreds of sailors who would, without it, have crowded the charity hospitals and alms-house hospitals in every commercial town on the coast.

An institution that is managed with very much more economy than any similar establishment of the government, cannot fail to be stoutly assailed, but we think the California Medical Society must be grossly misled if it undertakes to aid in breaking down the Marine Hospital Service.

Conium in Bronchial Catarrh.—Dr. J. J. Frederick Barnes, in the *British Medical Journal*, March 6th, gives his experience in the use of conium in bronchial catarrh. He uses the juice in small doses of from fifteen to twenty minims, every four hours or oftener according to the age and sex, in forty or fifty instances. In all save two cases, the treatment was entirely successful, about two days effecting a cure. The cases in question were those in which irritation of the tracheo-bronchial mucous membrane was the one salient feature following the antecedent exposure to cold or draught, where pyrexia and general malaise obtained, conium did not seem to be of much service for colds.

Carbonate of Ammonium Increases the Action of Bromide of Potassium.—Dr. Ramskill, in *London Lancet*, May 7th, says he gives carbonate ammonium with the bromide of potassium, because the carbonate is antacid and stimulant. Dr. Ramskill finds that from 45 to 60 grains of bromide sufficient for one day. He does not agree with Voisin that it must be given until reflex nausea, is suppressed on introducing a spoon as far as the epiglottis. Bromide has more influence over the *grand mal* than the *petit mal*. Bromism should be avoided. At night inunctions of camphor-chloral do good.

Color of Hair Changed by the Use of Pilocarpin.—Prof. D. W. Prentiss, of Washington, D. C., reports in the *Philadelphia Medical Times*, July 2d, the case of a lady patient, who, under treatment for pyelitis, with prolonged anuria. Pilocarpin was administered hypodermically, commencing December 16th, with gr. one-sixth and increasing it to one-third grain, so that in two months six to seven grains had been given. At the time the patient was seized, November, 1880, the hair was "a light blonde with a yellow tinge." In January, 1881, a chestnut-brown, and in May, 1881, almost a

pure black. There was also a change in the color of the eyes from light blue to dark blue.

This case besides being remarkable as regards the change in the color of the hair, demonstrates the value of pilocarpin in eliminating urea from the system. There was total suppression of urine at one time in the progress of the case, lasting eleven days, and twenty-one days in which the average flow of urine was less than one teaspoonful.

Nostrums in Relation to the Public Health.—Professor Albert H. Prescott, of Ann Arbor, Michigan, read a paper at the State Sanitary Convention at Ann Arbor (*New Remedies*, July, 1881), and it deserves to be read and distributed largely among the citizens of this State. He has shown in this paper the way the people are fleeced by patent or proprietary remedies. He gives numerous examples in “Pain Killers,” “Ague Cures,” “Fits Cures,” &c., of the utter worthlessness of most of them, and of the enormous prices that are paid for simple domestic medicines such as camphor, spirits of turpentine, hartshorn, &c. Our Board of Health would do well to reprint the article for distribution.

The Thirty-second Annual Session of the Medical Association of Georgia, was held in Thomasville, on April 20th, and 21st 1881. The following are the officers for the ensuing year :

President, William F. Holt, Macon ; First Vice President, Eugene Foster, Augusta ; Second Vice President, T. M. McIntosh, Thomasville ; Secretary, A. Sibley Campbell, Augusta ; Treasurer, K. P. Moore, Forsyth.

The next session will be held in Atlanta, on the third Wednesday in April (19th) 1882.

Communications should be addressed to the undersigned.

Respectfully,

A. SIBLEY CAMPBELL, Secretary.

Popular Science Monthly.—The course of this magazine has been exceedingly interesting. It has done wonders in interesting the people of this country in popular science, and its pages are filled with excellent contributions by the best scientific teachers. The July number contains one of the most attractive collection of

papers, as the following list of contents shows: The Races of Mankind, by E. B. Taylor, F. R. S.; European Schools of Forestry, by N. H. Egleston; Production of Sound, by Radiant Energy, by Alexander Bell; Physical Education, by Félix L. Oswald, M. D.; The Development of Political Institutions, by Herbert Spencer; On Fruits and Seeds, by Sir John Lubbock; How to Prevent Drowning, by Henry McCormac; Recent Advance in the Law of Intellectual Property, by Benj. V. Abbott; The Phenomena of Death, by Thomas D. Spencer, M. D., &c., &c.

The typography and illustrations are excellent.

THE NORTH CAROLINA MEDICAL JOURNAL offers as a premium for the best prepared and complete herbarium of the medicinal plants of the State, the following works, or their equivalent, in volumes the successful competitor may choose:

Curtis' "*Woody Plants*" and "*Catalogue of Indigenous Plants*" in one volume.

"*Fluckiger and Hanbury's Pharmacographia*," one volume; and "*Flora Americæ Septentrionalis; or a Systematic Arrangement and Description of the Plants of North America*." By Frederick Pursh, two volumes.

The collection must be prepared by the person presenting it. Each specimen must be neatly mounted on stout white paper 9x14 inches, (two or three specimens can be put on a sheet when they are small) and the name marked on each. This offer is made to members of the State Medical Society, and to licentiates of the Board of Examiners who may not be members.

Herbaria must be sent in on the 2d Tuesday in May, 1882, at the Concord meeting. For further particulars address Editor of the JOURNAL.

The Boston Medical and Surgical Journal of June 9th and 16th gives an account of the Centennial Anniversary of the Massachusetts Medical Society. The *Journal* of the 23d will contain the poem of Dr. Oliver Wendell Holmes, on the occasion. A silhouette portrait of Dr. E. A. Holyoke, with a fac-simile of the toast delivered by him at a dinner given on his one-hundredth birth-day.

Dr. Holmes' speech on the reception of the portrait of Dr. Jackson for the Medical Library, is like all of Dr. Holmes' speeches, very delightful.

The West Virginia Board of Health.—An examination of the law under which this new Board is to work, shows it to have a very wise foundation. The gentlemen composing the Board too have been selected with excellent good judgment, and we are satisfied we will see some good work done in due time. We notice the name of our friend, Dr. James E. Reeves, of Wheeling, prominent in the list, an honor worthily bestowed upon one who has given his time and money in aid of sanitary progress. West Virginia is to be congratulated.

The Chicago Medical Journal and Examiner issued as a supplement to their June number, a handsome reprint of the Proceedings of the American Medical Association as originally issued by the *Virginia Medical Monthly*

Ether Death: A Personal Experience in Four Cases of Death from Anesthetics.—This is the caption of a report by Dr. J. B. Roberts, in the *Philadelphia Medical Times*, June 4th, 1881. Three of the deaths were from ether, and one from bromide of ethyl.

The editor in commenting on the report says “we are impressed with the marvellous safety that attends even the careless use” of anæsthetics. “The dangers which surround chloroform have been too frequently written about and have been too often and too tragically exemplified to need further comment. He who still persists in the habitual employment of chloroform seems to us beyond the reach of argument or human speech. We let him alone.”

Why chloroform should be so much berated in this connection, and the habitual employment of it put without the pale, it is difficult to see. Chloroform in our hands, and in the hands of hundreds of surgeons from the battlefield of Chancellorsville to this present writing, has proved an efficient agent, and is not more dangerous than any other anæsthetic. Only last month, we saw a patient anæsthetized with chloroform while in the stage of shock following the crushing of this arm under car-wheels. His pulse became full and strong under the anæsthetic, amputation was accomplished, and recovery from anæsthesia came about without any unpleasant results. As long as surgeons find by long experience that chloroform is a safe agent, they will still persist in its habitual

employment, but it would be very great folly for them to give any anæsthetic, even whisky, without keeping constantly in mind, that *it is anæsthesia that is dangerous, and not any particular anæsthetic.*

If the person given chloroform or any other anæsthetic has his undivided attention placed on what he is doing, ignoring the surgery entirely, there would be fewer deaths to record from anæsthetics.

The International Encyclopedia of Surgery. A systematic treatise on the theory and practice of Surgery. By Authors of Various Nations. Edited by John Ashhurst, Jr., M. D. In six volumes, royal octavo. Illustrated with Chromo, Lithographs and Wood Engravings.

This is the announcement of a new encyclopædia by Messrs. William Wood & Company. It is to be sold by subscription only at \$6.00 a volume in muslin binding. The publishers promise that under no circumstance will the volumes be increased. The first volume is expected to appear in the fall of this year. We notice among the authors contributing, Dr. S. D. Gross, Dr. Stricker of Vienna, Dr. VanBuren, Dr. Stillé, Dr. Delafield, Surgeon-General Wales, Dr. Verneuil of Paris, Dr. Volkmann of Halle, Dr. D. H. Agnew, Dr. Brinton, Dr. Christopher Johnston, Dr. Ashhurst, Jr., Dr. Hunter McGuire, Dr. Bryant of London, Dr. Cheyne of London, Surgeon Bell, Dr. Ollier of Paris, Dr. A. C. Post, Mr. Christopher Heath, of London, Dr. McLeod of Glasgow, Mr. Annandale of Edinburgh, Dr. Marion Sims, Dr. Parvin, and many others of more or less distinction.

Holmes' Surgery Americanized.—Messrs. Henry C. Lea's Son & Co., will issue at an early day a new edition of Holmes' Surgery. Some of the ablest surgical writers in the country are engaged in the revision, and there is no doubt the result will prove in every way acceptable. The work is to be sold by subscription only.

THE ODORS OF DISEASES.

Dr. Julius Althaus, concluding a lecture upon the Physiology and Pathology of the Olfactory nerve (*Lancet*, May 21st), remarks that "whole treatises have been written upon the recognition of disease by sniffing. Dr. Heim, who was the popular physician of the day at Berlin some fifty years ago, recognized measles, scarlet fever, and smallpox by their peculiar smell on first entering a house, and before seeing the patient. Mr. Bernard, of Upton Park, has recently recorded in the *Lancet* two cases of smallpox in which the patients themselves perceived a dreadful smell, apparently just at the moment of being exposed to contagion; and one of them when suffering from the eruption said that his perspiration had the same smell as that which made him sick before. When attending Skoda's clinique in Vienna twenty-five years ago I noticed that this celebrated teacher was in the habit of sniffing when approaching the bedside of patients suffering from the last stages of pneumonia, phthisis, typhoid fever, etc.; and he would give a bad prognosis when he perceived what he called "the cadaverous smell." Mr. Crompton, of Birmingham, has noticed a peculiar earthy smell from a body a week or a fortnight before death, which, he says, has never deceived him—an appropriate illustration of the saying "Earth to earth." Dr. Begbie distinguished typhus and typhoid fevers by the sanguineous (others call it "mousey") smell of the former. Prof. Parkes has noticed a peculiar odor in the skin of cholera patients. A pungent smell in the chamber of a lying-in woman shows that lacteal secretion is well established, while an ammoniacal smell has been said to indicate the approach of puerperal fever. Many women emit a peculiar odor while menstruating, which resembles a mixture of blood and chloroform; and this is believed to arise not so much from the discharge as from the more pungent character of the sweat secreted in the axilla. Persons of a costive habit have a fecal smell, and this is also often noticed in hypochondriacs and lunatics. In uremia, whether owing to kidney-disease or to severe retention of urine, a nitrous odor is emitted by the body; and the presence of pus in some part of the body has been recognized by a peculiar warm-milky smell of the patient.

Apart from the odor of the sick room and the body generally

the smell of the sputa, urine, feces, sweat, ulcers, etc., was carefully noted by the older practitioners, and utilized for prognosis and treatment. Unquestionably there was much that was fanciful in such ideas; but occupied as we are at present with the study of more precise and definite symptoms, we have, perhaps, gone to the other extreme in neglecting such symptoms altogether. Everybody has his own special odor, and this varies according to the circumstances of life, the food taken and the state of health in which he happens to be. That it should be altered in disease, and that special diseases should have special odors, is only what one would expect; yet the increase of cleanliness and ventilation has no doubt done away with a large variety of smells which formerly used to assail the nostrils of the physician."

A CASE OF CROUP TREATED BY PASSING CATHETERS INTO THE TRACHEA BY THE MOUTH.

Dr. J. Wilson Paton (*British Medical Journal*, vol. i., 1881, p. 803) give the case of a child of three years suffering with a cough following measles. This gradually increased in severity until one night Dr. Paton was called and found him suffering from intense dyspnoea, quite unable to speak, and his lips of a dark, livid color. The cough was constant, brassy, and without expectoration. The respirations were thirty-five per minute, the cartilages of the ribs and sternum being drawn in at every effort to breathe, and crepitation existing over both lungs. The fauces were healthy; the pulse was 144, very weak. Having a No. 11 prostatic catheter with him, Dr. Paton determined to pass it into the trachea instead of performing tracheotomy. Watching an opportunity while the tongue was depressed with a spoon, the catheter, curved a little more than usual, was passed into the trachea during an attempted inspiration, and without the slightest difficulty. A severe struggle followed, lasting perhaps a minute or two, the face becoming purple and the eyes staring with fully dilated pupils. The paroxysmal efforts to

expel the tube being unsuccessful, a pretty full inspiration, partly through the tube and partly through the larynx, followed; about two ounces of frothy, bloody, and purulent mucus were ejected by the tube and the mouth; the livid color disappeared, and the child lay down, breathing easily through the tube. The presence of the tube did not prevent his swallowing milk, although sometimes a little of this was ejected from it during a cough. The tube was retained *in situ* by a strip of plaster, and the teeth were prevented from closing on it by means of a pear-shaped piece of hard wood. Six hours later the little patient was much easier, though the cough continued. A bronchitis kettle was used in the room. The tube was removed without trouble after it had been in the trachea about eleven hours, as he had bitten it and no air was passing through it. Shortly after its removal symptoms of obstruction gradually reappeared, and an ordinary gum-elastic catheter, No. 12, was introduced, only a slight momentary struggle and cough supervening.

The presence of the tube led again to a very free expectoration of mucus. In the course of a few hours the respirations and pulse became lower, and crepitation and dyspnoea ceased. When the tube had been in for forty-eight hours and a half it was removed, and not again introduced. Further recovery was rapid and complete.

DISCUSSION UPON DIGITALIS BEFORE THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Dr. H. C. Wood, in opening the discussion, referred to the current views in regard to the action of digitalis upon the nervous apparatus of the heart, and claimed for it a peculiar effect upon the heart-muscle. This influence which had been fully demonstrated by physiological experiment and sustained by clinical observation, renders digitalis particularly serviceable in the condition of heart disease in which the increased work required of the heart is greater than the increase of the power, without regard to the particular valve which may be affected. It improves the nutrition of the heart by regulating its contraction and lengthening the diastolic

interval, doing away with the rapid, imperfect contractions which interfere with the blood-supply of the cardiac muscle. In such cases the nutrition of the heart suffers because it is necessary to have lateral distension of the aorta in order to fill the arteries in the muscular tissue. A little digitalis steadies the heart, and therefore improves its condition and retards degeneration.

In chronic valve-trouble of the heart, digitalis is serviceable, and sometimes must be given in large doses. A half-drachm dose of the tincture apparently saved from impending death two cases of advanced heart trouble coming under the speaker's observation : they afterwards got well enough to attend to their business. It enables the heart to gather up its strength, and keeps it going until the last. By the surgeon, digitalis is often used improperly. Thus, it is not rarely given in aneurism, where the great danger is from increased lateral pressure, not want of forward pressure. In one case coming under his observation digitalis caused the rupture of an internal aneurism at the hospital. The patient had been brought in without any diagnosis, and no one had suspected aneurism.

In acute diseases with failing heart, digitalis may be employed : such a condition may occur in asthenic or in the advanced stages of sthenic pneumonia. In the early stage of sthenic pneumonia it is improper to give it. Such a medicine as *veratrum viride*, which produces vaso-motor paralysis, is indicated, so "as to bleed a man into his own tumors." Blood is drawn to the lungs because there is a local vaso-motor palsy, and the local attraction ceases. When the lung is consolidated throughout a large extent, the heart is overworked ; by and by it begins to fail, the pulse gets rapid and feeble : now digitalis comes into play. It will save life in such a condition, when the patient without it must die. Take the case of a drinking man, seen a few days since, suffering with pneumonia, pulse 150 to 160, respirations 60 to the minute, delirium persisting for two or three weeks, expectoration of pure blood, &c. This man was given ten minims of tincture of digitalis every two hours, day and night, until the pulse fell to 60,—when the digitalis was stopped, and resumed as the pulse went up. By the aid of milk and whisky the patient was saved.

Two points in conclusion : (1) in regard to the cumulative action, (2) in regard to the cause of the slow action, of digitalis. The

remedy acts slowly in producing its full effect, and its effects are very permanent when they do appear. Some agents act more quickly than others; digitalis acts slowly and cumulatively, not only because of its special influence upon the heart, but because it only comes very slowly in contact with the heart-structure, since it osmoses slowly into and out from the body. Where it fails to act upon the kidneys, it is more apt to act cumulatively upon the heart. The practical point is this: watch the kidneys when giving large doses of digitalis: if water is not passed freely, then cumulative action will be apt to occur. In a case of chronic pleurisy Dr. Wood tried to run off the water by the kidneys; the pulse ran down steadily from 70 to 40 in four days after the medicine had been withdrawn; it was a long time before the effect of the digitalis was manifested, and it was long before it ceased to act. In the pneumonia case, after the pulse began to drop, it was eighteen or twenty hours before it again reached the normal. The longer the digitalis is in acting, the more likely it is to have a lasting effect. After abdominal tapping, the digitalis often shows itself in reducing the heart's action. Either the digitalis has been lying in the intestines unabsorbed or in the cellular tissue: probably all the fluids are saturated with the drug.

Digitalis is a very useful remedy in cases of syncope and collapse. Formerly alcohol alone was used. One of the advances of modern therapeutics was to teach the danger of giving large doses of alcohol in cases of surgical shock. Belladonna and digitalis are proper remedies, given by the hypodermic injection. The pulse begins to fill up in twenty minutes or half an hour. No irritation is produced at the point of puncture. Throw in twenty minims of the tincture at once, and expect to find the result in half an hour.

He did not wish his remarks to be understood as declaring that digitalis was entirely without danger, but he had used it in hundreds of cases, and had seen men apparently dying revive under its effects. It is important to stop it as soon as evidence appears in the pulse that is beginning to be absorbed. Used in this way, he did not believe that there would ever be any serious cases of poisoning with it.

* * * * *

Dr. Wood, in closing the discussion, said that he would refer to

but two or three practical points that had been touched upon. First, in regard to the choice of preparations: the general preference appears to be for the infusion. He believed that the only reason that the infusion was preferred as being more efficient is because it is usually given in relatively larger doses than the tincture. He would mention, in passing, that the infusion as well as the tincture obtained from an unknown druggist is not rarely an unreliable preparation. He had seen very few cases where the stomach-disturbance was considerable, and believed gastric disturbance was less apt to occur when the tincture was given than with the infusion. With regard to digitalin, he had not made much use of it: it is not the alkaloid, but merely a purified extract, and comprises at least two principles—the one soluble in water, the other insoluble. It is uncertain in its composition and in its results. As the dose of digitalis is so small, it is not necessary to resort to this substance, with which you might get results or you might not.

He wished to be distinctly understood as discountenancing the use of large doses of digitalis until the small one have failed: he would never use powerful remedies when milder ones will do. With regard to Dr. Leaman's case, the heart had apparently been starved, and the use of digitalis had flushed it with fresh blood and gave it a new stock of nutrition. In such a case he would advise continuing the remedy, giving small doses from time to time, in order to continue the effect. The action of digitalis upon the frog's heart is that it is rarely arrested in diastole, more frequently in systole. As regards the question of its effect upon the pneumogastric nerve, in some cases the effect is to destroy life in this manner. In such cases we can restore the action of the heart by cutting the pneumogastric nerve. As a rule, however, the effect is greater upon the heart than it is upon the nerve, and the animal dies of cardiac spasm. It has the same effect upon the pulse of mammals; its full effect produces a weak pulse, sometimes dicrotic: this he had seen beautifully illustrated in man. It means that there are two antagonistic effects upon the heart,—upon the heart-muscle and upon the brake-action: this is undoubtedly the explanation of the dicrotic pulse and of the double wave written upon the manometer. Later the arterial pressure is found to be falling; looking at the heart, the dilatation becomes less, the diastole becomes imperfect, only a small amount

of blood now enters its cavities, on account of the cramp of the muscular tissue, just as in the tetanic spasm or the muscles of strychnia-poisoning; then comes cramps of the muscles of respiration, and death. The pulse becomes frequent in digitalis-poisoning, because the heart is so constricted that the blood is dammed back and cannot get into the aorta.—*Philadelphia Medical Times.*

A METHOD OF FACILITATING VERSION IN CASES OF NEGLECTED SHOULDER-PRESENTATION.

Dr. William Donaldson, in *British Medical Journal* says: In cases of neglected shoulder-presentation, I venture to suggest the following procedure, which from practical experience, I have found extremely serviceable in many cases, and which, as far as I know, has neither been noticed in midwifery text-books, or practiced. That the operation of decapitation, now advocated, is attended with a good deal of difficulty, and has numerous drawbacks, will, I think, be allowed by many; therefore in firmly wedged shoulder-presentations, I have proceeded as follows—premising, of course, version without evisceration to be impossible.

The child's arm having been brought down, a circular incision is made above the wrist or near the elbow, through the skin only. The wrist being grasped with one hand, the finger of the other is inserted into the incision, and, by a rotatory movement, made to flay the skin from the subjacent soft parts up to the shoulder. Still using the finger, the pectoral muscles are torn through, and the clavicle is broken either by hooking the finger over it, or, if it will not give way—which is unusual—the orotchet. The subcutaneous parts of the shoulder, including the scapula, the acromial end of the clavicle, and the humerus, with its muscles, can then be readily moved by traction—little force being necessary—through the sleeve of skin previously dissected. This having been accomplished, I have always found the subsequent evisceration and version rendered much more practicable, the upper parts of the child (the shoulder being removed and guarded by a smooth flap) ascending with com-

paratively little force. This method of removing the shoulder is unattended with the slightest risk to the maternal soft parts, is easily performed, leaves no open surface, and renders the subsequent removal of the child easier. In six cases attended by a brother practitioner and myself, we have been much pleased with the results; and I believe any of my professional brethren who give the method a trial will be equally pleased.

BOOKS AND PAMPHLETS RECEIVED.

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Fortieth Annual Annoucement of the Saint Louis Medical College. 1881-82.

Medical College of Ohio. Sixty-First Annual Catalogue. Session of 1881-82.

Trance and Trancoidal States in the Lower Animals. By Geo. M. Bard, A. M., M. D. New York. 1881. Pp. 17.

Excision of the Rectum for Malignant Disease. By N. Senn, M. D., of Milwaukee. New York. 1881. Pp. 16.

Ovarian Tumors. At What Stage of the Disease is it the Proper Time to Operate? By El. Brock, M. D. St. Louis. 1880. Pp. 7.

Ninety-Eighth Annual Catalogue of the Medical School (Boston) of Harvard University. 1880-81. Cambridge, Mass. Pp. 42.

Dengue. By J. G. Thomas, M. D., Savannah, Ga. Reprint from 6th Volume American Public Health Association. 1881. Pp. 20.

Third Annual Report of the State Board of Health of the State of Rhode Island, for the year ending December 31, 1880. Pp. 290.

Hip-Injuries, Including Hip-Joint Disease, and Fractures of the Femoral Neck. Splints for. By DeForest Willard, M. D. Reprint. Pp. 4.

Annual Reports of the Board of Health and of the Vital Statistics of the City of Lowell for the Year 1880. Lowell, Mass. 1881. Pp. 12.

Tubercular Laryngitis or Laryngeal Phthisis. A paper read before the Ann Arbor Medical and Surgical Society. By C. J. Lundy, M. D. Pp. 11.

Report of the Health Officer of the District of Columbia for the year ending June 30th, 1880. Washington, D. C. 1881. Pp. 243.

The Hygiene of Emigrant Ships. By Thomas J. Turner, A. M., M. D., Ph. D. Reprint American Public Health Transactions. 1881. Pp. 70.

The Quality of Mental Operations Debased by the Use of Alcohol. Certain Depraved States Analyzed. By T. L. Wright, M. D. Reprint. Pp. 13.

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Proceedings of the North Carolina Press Association at the Seventh Annual Meeting. Held in Asheville, June 30th, 1880. Asheville. 1881. Pp. 26.

Analysis and Valuations of Commercial Fertilizers and Chemicals. Season of 1881. Department of Agriculture, North Carolina Experiment Station. Pp. 14.

Glaucoma Caused by Mental Worry. Illustrated by the Report of a case. By Learius Connor, A. M., M. D. Detroit: Reprint from Detroit Lancet, July, 1881. Pp. 6.

Johnstone Surgical Table, for Horizontal Extension, Reduction of Fractures, and all Surgical Operations: With Directions for its Use. Philadelphia, Pa. 1880. Pp. 11.

Transactions of the American Dermatological Association with the President's Address. At the Fourth Annual Meeting, Newport, R. I. 1880. Philadelphia. 1881. Pp. 84.

Second Annual Report of the State Board of Health. Lunacy and Charity of Massachusetts. To which is added a Statistical Appendix. Boston: January, 1881. Pp. 92.

Roger's Bird's Eye View of the Correct Spelling of 25,000 words of the English Language. Price 25 cents. A large chart and very useful. L. H. Roger, 75 Maiden Lane, N. Y.

Eighth Biennial Report of the Trustees. Superintendent and Treasurer of the Illinois Asylum for Feeble-Minded Children at Lincoln. October 1st, 1881. Springfield. 1881. Pp. 70.

Hip-Joint Disease: Death in Early Stage from Tubercular Meningitis. By DeForest Willard, M. D. With microscopical appearances, with cuts, by E. O. Shakespeare, M. D. Reprint. Pp. 20.

The Vegetation of the Rocky Mountain Region, and a Comparison with that of Other Parts of the World. By Asa Gray, and Sir J. D. Hooker, F. R. S. Washington. February 11th, 1881. Pp. 77.

Second Inaugural Address. Delivered before the New York Academy of Medicine, February 3d, 1881. By Fordyce Barker, M. D., LL. D. President of the Academy. Pp. 20. New York. 1881.

Pnthisis Pulmonalis and its Treatment with Hypophosphites. By L. DeRiemon, M. D. University of Paris (France). Late Clinical Assistant to Dr. J. F. Churchell, Paris. New York. 1881. Pp. 16.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. II. Berhez—Cholas. Washington: Government Printing Office. 1881. 4to. Pp. 990.

Marine Algæ of New England and Adjacent Coast. By W. J. Farlow, M. D. Reprint from Report of the U. S. Fish Commissioner for 1879. Washington: Government Printing Office, 1881. Pp. 210. Fifteen plates.

Simple Methods to Stanch Accidental Hemorrhage. By Edward Borek, M. D. Member of the Medical and Chirurgical Faculty of Maryland and Baltimore Medical Association, &c. &c., &c. St. Louis, Mo. 1881. Pp. 4.

Eleventh Annual Report of the New York Ophthalmic and Aural Institute, 46 East Twelfth Street near Broadway. For the year beginning January 1st, 1880 and ending December 31st, 1880. New York. 1881. Pp. 19.

Jones' Chemical Vade Mecum for Medical Students. Intended as a Refresher to the Memory upon the more Important Facts in Chemical Science. By George Jones, F. C. S. London: Henry Kimpton, High Holborn. 1881. Pp. 87.

Clinical Illustrations of Favus and its Treatment by a New Method of Depilation. By L. Duncan Bulkley, A. M., M. D. Attending Physician for Skin and Venereal Diseases at the New York Hospital, &c., &c. New York. Pp. 14.

Objects of Sex and of Odor in Flowers. Read before the American Association for the Advancement of Science. Saratoga, August, 1879. By Thomas Meehan. Prof. in the State Board of Agriculture of Pennsylvania. Philadelphia. 1881.

A Treatise on the Diseases of the Nervous System. By William A. Hammond, M. D. With 112 illustrations. Seventh Edition, rewritten enlarged and improved. New York: D. Appleton & Co., 1, 3 and 5 Bond Street. 1881. Pp. 929. Svo. Cloth.

Hygiene and Treatment of Catarrh. Therapeutic and Operative Measures for Chronic Catarrhal Inflammation of the Nose, Throat and Ears. Forty illustrations. Part II. By Thomas F. Rumbold, M. D. St. Louis: Geo F. Rumbold & Co. 1881. Svo. Pp. 298.

Rawley Springs, 2,000 Feet Above the Level of the Sea. near

Harrisonburg, Rockingham county, Virginia. With an Analysis of the Waters, and Letters of Skilful and Eminent Physicians, and Certificates of Cure, Showing the Great Remedial Virtues of these Waters in many Diseases. Dayton, Virginia. 1881. Pp. 24.

Anatomical Studies upon the Brains of Criminals. A Contribution to Anthropology, Medicine, Jurisprudence and Psychology. By Moriz-Benedikt, Professor at Vienna. Translated from the German by E. P. Fowler, M. D. New York: Wm. Wood & Co. 1881. Pp. 185.

The Management of the Perineum During Labor, and the Immediate Treatment of Lacerations, and the Obstetrics and Gynecology of William Harvey. By Francis H. Stuart, A. M., M. D. Lecturer on Clinical Obstetrics. Long Island College. Brooklyn, N. Y. Pp. 30. New York. 1881.

Atlas of Gynecology and Obstetrics. Edited by Dr. A. Martin, Professor of Gynecology in the University of Berlin. Containing 475 black, and 37 colored illustrations from the original designs from 91 authors. Supplemented by numerous illustrations from J. P. Magrier's *Nouvelles Demonstrations d'Accouchments*. A. E. Wilde & Co., Publishers, Cincinnati, Ohio.

A Statistical Report of Two Hundred and Fifty-Two Cases of Inebriety. Treated at the Inebriates Home, Fort Hamilton, L. I. (From November 1, 1879 to September 16, 1880.) Read before "The American Association for the Cure of Inebriates," at the Annual Meeting, October 20, 1880. By Lewis D. Mason, M. D. Physician to the Inebriates Home, Fort Hamilton, L. I. &c., &c. New York. Pp. 25.

Anatomical Plates. Arranged as a Companion Volume for the Essentials of Anatomy, and for all works upon Descriptive Anatomy. Comprising 439 Designs on Steel by Prof. J. N. Masse, of Paris, and Numerous Diagramatic Cnts Selected or Designed by the Editor, Together with Explanatory Letter-Press. Edited with Revisions, from the Original Translation of Prof. Granville Sharp Pattison. By Ambrose L. Ranney, A. M., M. D. New York: G. P. Putnam & Sons, 27 and 29 West Twenty-Third Street.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 2. Wilmington, August, 1881. Vol. 8.

ORIGINAL COMMUNICATIONS.

REMOVAL OF INFERIOR MAXILLARY BONE, THROUGH
BOTH RAMI FOR OSTEO-SARCOMATOUS DISEASE—
TRANSFUSION—LARYNGOTOMY.

Operation by PERCY T. NORCOP, M. D., F. R. C. S., Ed.

Transfusion.—On Wednesday, May 18th, Gill Gorman, colored, presented himself at my office suffering with an immense tumor involving the inferior maxillary from angle to angle. Patient a strong, robust and temperate individual, married.

History of the Case.—The patient dates the first appearance of the tumor back, some seven years, considering the cause to be the result of a blow on the jaw by a piece of wood.

Two weeks after the infliction of the blow, the patient noticed a small nodule to the left of the mental process, this gradually increased, slowly, for the first five years, but latterly its development has been rapid. During the last four months, both articulation and deglutition have been performed with difficulty.

From the nature of the growth, i. e., its slow development, and semi-osseous character on palpation. I diagnosed the tumor as one of osteo-sarcoma and advised the patient to submit to an operation as the only chance of prolonging his existence.

On May 28th, the patient consented to have the operation performed. On that day, Doctors Hardy and W. D. Hilliard examined the patient and agreed with me as to the advisability of an operation. My friends, Doctors Bahnson, Graham, Wood and Burgin, who were visiting Asheville during the sitting of the Medical Society, also examined the patient and arrived at the same conclusion.



At 4 P. M., June 1st, in a little rural cottage on the side of the picturesque Bean-Catcher Mountain, where the fresh air of heaven is equal in its antiseptic powers to the carbolic spray of Lister, the operation was commenced. Doctors Hardy, W. D. Hilliard, Bahnson, Graham and Burgin were present and afforded the most valuable assistance.

The patient being sufficiently anesthetized by chloroform, it was deemed expedient considering the extensive character of the tumor to perform laryngotomy. This was quickly done, through the crico-thyroid membrane, and a rubber tracheal tube inserted into the wind-pipe, the patient continuing to breathe with regularity. A silk ligature was now passed through the tongue and given to an assistant to hold. An incision was made from a point below the lobule of the ear at the posterior part of the ramus of the jaw on the left side, then around the base, and ascending on the ramus of the opposite side to a height corresponding to its place of com-

mencement. In this incision both facial arteries were divided and ligatured. This upper immense flap thus circumscribed was then dissected from off the tumor and bone upwards. The lower flap being dissected downwards as far as the hyoid bone. Vessels met with were ligatured. The muscular structures, viz.: the mylo-hyoid insertion of digastric, genio-hyoid, genio-hyo-glossus, a portion of insertion of masseter and internal pterygoid were next divided, and the bone sawn through on both sides at a point coinciding with the puncture of middle and superior third of the ramus. The bone and tumor being thus freed was removed, and all spouting vessels ligatured. Throughout the dissection the knife was kept close to the bone and tumor, injury to Steno's duct and the sublingual glands being carefully avoided. All bleeding having ceased the flaps were then adjusted and united with silver wire.

The patient was now placed in bed, respirations through tracheal tube, twenty-eight. Pulse 98 and weak. I consider the patient to have lost about two pints of blood during the operation. During the remainder of the night I remained in the house. At 10 P. M., patient motioned for water, but was unable to swallow, pulse 99, very weak, respirations 28 per minute.

June 2d, 4 A. M. Pulse and respiration the same. Brandy and water injected per rectum. Brandy and ammonia hypodermically.

10 A. M. Pulse 100, very weak. Respirations 30. No signs of reaction.

1 P. M. Patient's extremities becoming cold and clammy, hot bricks in damp cloths applied to keep up warmth. Hypodermic injections of brandy and ammonia kept up with some slight benefit.

3 P. M. No reaction having occurred I decided to transfuse blood into the patient. Having obtained two robust negroes who consented to sell their blood for one dollar per ounce, and being most ably assisted by Drs. Bahnson, W. D. Hilliard, Graham and Krowell, I obtained from the first man ten ounces which was allowed to flow in a bold stream from the median basilic vein into a small earthenware basin floating in hot water. The fibrin was then whipped into clots by rods and removed, the temperature of the blood being now about double one hundred and two degrees, was injected into the median basilic vein of the patient by means of an ordinary Davidson's syringe. Glass tubes drawn to fine points being attached to

either end. In filling the syringe the air was first completely driven out by allowing the bulb to first fill and then emptying the same through both extremities (all valves being, of course, removed). The glass ends being kept in the blood, no air could enter on the second inflation by blood of the instrument used.

The apparatus being now filled, one extremity was passed, as before mentioned into the vein of the patient, and tied. Compression of the bulb being now made, the blood flowed freely into the circulation; when the bulb required refilling, compression was made with the finger and thumb on the tube leading from the bulb to the patient and as close as possible to the bulb itself. The first eight ounces were thus passed, (no bubble of air having entered). With some slight signs of improvement in the patient's circulation and temperature, eight or ten ounces were next drawn from negro No. 2, and passed in like manner with evident signs of improvement in the patient. The cold sweats ceased. Pulse, 102. Temperature 99°. Respiration 30. One hour after transfusion of blood patient fell asleep, and continued sleeping until 3 o'clock in the morning.

June 3d. Visited patient at 6 A. M. Pulse 110 and weak. Respiration 30. Temperature 100°. At this hour patient swallowed a little water and brandy for the first time since the operation. Tracheal tube has been well cleansed out with a feather.

2 P. M. Patient again fell into a state bordering on collapse. Radial pulse imperceptible. Extremities cold. Injected two ounces of brandy, per rectum, with but little benefit.

4 P. M. Again transfused ten ounces of negro blood into patient, being assisted on this occasion by Drs. Hardy, Kennedy, and Warren, opening the median basilic vein of patient at a point above the seat of transfusion of previous day.

Not a bubble of air entered the patient's vein, who rallied almost immediately, hot bricks being kept up round the patient's body and extremities.

6 P. M. Pulse distinctly perceptible, being 115 to the minute. Temperature 99.8°.

10 P. M. Managed to get two ounces of strong beef tea with brandy into patient by means of a tin funnel passed to superior portion of œsophagus.

Midnight. Patient very restless. Administered one-sixth grain

of morphia sulph. Patient has passed no water since the operation, but the bladder is quite empty.

June 4, 9 A. M. Found patient with a strong pulse, 120 to the minute. Temperature 101.5°. Slept fairly well during the night. Has swallowed, by means of the funnel, eight ounces of beef tea. Cold water being given freely. Wound had healthy appearance. Pus and débris drawing freely away. Has passed no urine. Catheter introduced, but no water exists in bladder.

June 5, 9 A. M. Temperature 102°. Pulse 124. Wound healthy. Has passed five ounces of dark, turbid urine. Wound suppurating in healthy manner, all discharges finding free vent for their escape. Patient takes beef tea, milk and eggs freely, by the mouth, through tube. Two eggs with brandy and milk being injected twice daily per rectum.

June 6. Patient has passed a restless night. Three-fourths grain of morphine having had but little tranquilizing effect on him. Pulse 125. Temperature 102.5°. Respirations 28. Bronchitic symptoms have made their appearances and are causing much annoyance to patient by constantly choking up tracheal tube with mucus. Applied mustard plasters to sternum. Patient takes his liquid nourishment well.

June 7th. Patient passed a fair night. Pulse 122. Temperature 102°. Respirations 28. Complains much from pain of two ulcers on arm, the result of injections, hypodermically, of brandy and ammonia, used on second day, while patient lay in a state of collapse; applied soap plaster to ulcerated parts.

4 P. M. Removed the tracheal tube and closed the laryngeal wound with plaster. Patient breathes well through mouth, drawing out his own tongue by means of cord, when coughing up mucus.

June 8th. Was called by one of his attendants at 5 o'clock A. M., in consequence of plaster giving way over laryngeal aperture, and found my patient much excited. Closed the wound with hair lippins and figure of eight sutures. Pulse 120. Temperature 101. Respirations, after the insertion of hair lip pins, twenty-seven per minute. Passes his water freely, and bowels moved, this being the first fecal movement since day of operation. Patient says he is going to get well, articulation being wonderfully good since laryngeal aperture was closed.

June 9th. Patient progressing favorably. Pulse 115. Temperature 100.°5. Respirations 26. Takes his liquid food well, but refuse to drink any more beef tea, chicken broth substituted instead, Wound healed up excepting at two points on either side coinciding with points about one-fourth of an inch above angle of ramus, through these apertures the discharges pass freely.

June 10th. To-day the last arterial ligature has come away. A portion of masseter muscle, in a sloughing state projected through the wound and was cut off. Pulse 108. Temperature 101. Respirations 28. Bronchitis still annoying the patient a great deal. Taking liquid nourishment as usual.

June 11th. Patient slept well. Pulse 106. Temperature 100.5°. Respirations 25.

June 12th. Pulse, temperature and respirations the same. Bronchitic symptoms and much expectoration.

June 13th. Patient refuses to take both beef tea and chicken broth, both of which have to be administered by force. Has had a very good passage per rectum. Pulse 106. Temperature 100.5°. Respirations 26.

June 14th. This morning patient struck his attendant on the head with his closed fist, for giving him beef tea when he asked for water. (I quote this as a sign of improvement in muscular energy.) Pulse 105. Temperature 100.3°. Respirations 25.

June 15th. The pendulous skin flap contracted to natural size, but from the constant wetting of the wound by liquid food the of union looks somewhat boggy. The chin or lower flap is now supported by rubber plaster passed under the chin and over the temples. Pulse 115. Temperature 102.5°. Patient complains of much oppression in breathing, respiration 32 to the minute. Skin dry. Bronchitic symptoms have again returned with double vigor, on auscultation of chest, dry and moist râles heard throughout. Patient suffers much from general depression. On inquiry I find that on the previous night his attendant took off his underclothing for the purpose of having them washed and left him without any flannel clothing during the night. This negro charity will most probably cause his death.

June 16th. Patient decidedly worse. Pulse 120. Temperature 103.4°. Respiration 35. Experiences difficulty in coughing up

tenacious secretion. Has a hollow shrunken look, but is perfectly conscious of what is going on around him.

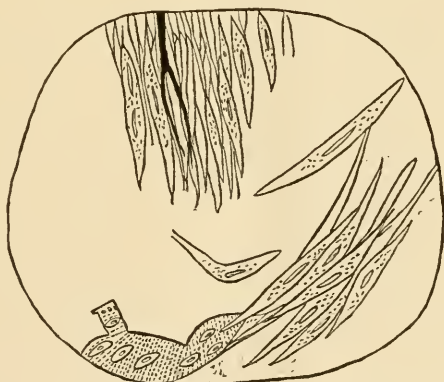
At midnight respiration ran up to 43. Pulse very weak, and extremities becoming cold. Brandy and egg injected per rectum. Brandy and ammonia hypodermically.

June 17th, 3:50 A. M. Patient ceased breathing, being conscious to the last.

I consider the cause of death to be capillary bronchitis, due to exposure on the night of the 14th, when patient was left without under clothing. The wound retained its healthy appearance throughout, carbolic spray being freely used.

EXAMINATION OF TUMOR AFTER REMOVAL.

The growth and inferior maxillary bone weighs three pounds. Is encapsuled.



On Section.—It is found composed of osseous matter and cysts undergoing mucoid degeneration. The remainder and principle bulk of the tumor being of a fibro-plastic character. On microscopical examination of half a dozen sections we find characteristic spindle cells to predominate.

From the interior of the growth, however, I obtained a specimen representing the cell formation recognized as the "*myeloid form*" consisting of the large many nucleated cells with pigmentary matter scattered throughout.

REPORT OF THE CHAIRMAN OF THE SECTION ON SURGERY.

Read before the North Carolina Medical Society, at the 28th Annual Meeting, held at Asheville, June 2d, 1881.

By ALLMAN HOLMES, M. D., Clinton, N. C.

Mr. President and Gentlemen :

In response to the appointment of Chairman, of Section on Surgery and Anatomy at our last meeting, I shall attempt to present for your consideration some of the comparatively more recent developments pertaining to this Section. In accordance with the construction placed upon the resolution of Dr. Shaffner, in Goldsborough, May, 1878, "postals" were forwarded to members of the Society asking for material bearing on this particular subject to be presented. In answer, two gentlemen kindly contributed. An interesting communication from Dr. Foote, of Warrenton, and several from Dr. Thomas F. Wood, of Wilmington. To the latter I am particularly indebted for valuable suggestions on antiseptic surgery, and here allow me to say, the medical profession of North Carolina cannot too highly appreciate the efforts in behalf of medical science by the editor of our MEDICAL JOURNAL. We should willingly and liberally contribute to aid him in his laborious work remembering, in this, as in everything else, much can be accomplished for the general good by the aggregation of little things. In no branch of medicine has more rapid studies been made in the past few years than in surgery. But should the matter I present, be of less importance, because of limited resources to point you to thoroughly practical results, I at least hope to elicit something better not only on the subject matter I offer ; but other, of more interest and value from those who can give wise lessons of abundant experience. First, I call attention to antiseptic surgery.

REPORT ON THE PROGRESS OF SURGERY.

Antiseptic Surgery, which has made such great headway since its introduction by Dr. Lister, may be said to have reached its highest point of development during the past three years, and has probably arrived at the period of reâction, so familiar to medical

men who study the history of surgical procedures and new remedies. There is no doubt that antiseptic surgery will take a permanent place, especially in hospital practice in the larger cities. The prospect now is, that the more costly and minute detail of the practice will fall into disuse, except in those hospitals where the personal enthusiasm of the surgeon will be strong enough to inspire confidence in it, and where the hospital record shows a strong contrast in its favor, as compared with results prior to its adoption. If this opinion be well-founded, all the general practitioner will know of listerism will be from the metropolitan hospital reports.

The use of antiseptics, is more largely employed in opening the large cavities of the body, and many conscientious surgeons consider a neglect of antiseptic precautions as exceedingly culpable. All of the best ovariologists use the antiseptic treatment in some modified form.

Last year a reactionary lecture from Professor von Bruns, of Tübingen, entitled "Fort dem Spray! ("away with the spray") has served to give a considerable weight against the employment of carbolic spray. Dr. von Bruns after having used the spray for some time, performed subsequently a gradually increasing number of operations without it, and comparing the two results his conclusion was: "The carbolic spray in surgical operations is not only useless and unnecessary, but also disagreeable and productive of interruption: it should therefore be abolished."

"Figures" he says "will be necessary to prove the correctness of my assertions that the spray can be safely left off. Therefore, let the results of my clinical wards speak. They are large enough, and extend over a sufficient length of time, to allow even those who differ from me to accept them. I will only speak of osteotomies of the long bones, exarticulations, resections, and amputations. These operations not only form a well defined group in themselves, and are everywhere carried out under the carbolic spray; but they constitute the class of cases which formerly contributed so large a proportion of the hospital mortality through the so-called wound diseases—pyæmia, septicæmia, and erysipelas. I will just remark further, that *instead* of the spray I employ temporary irrigation—lasting a few seconds only—with a 2 per cent. and a 5 per cent. carbolic solution several times during any long operation, and at the

termination of short operations. In addition to this, I wash the whole wound-surface with 5 per cent. solution at the completion of the operation ; and in the case of amputations, after the drainage-tubes are put in, I wash out the wound through the tubes with the same solution, if there appear to be any bleeding. The same applies to the dressing of wounds after operation. I simply use a 2 per cent. solution for irrigation. In all other respects the antiseptic method is most carefully carried out.”*

The following statistics are given in support of the opinion expressed :—Forty-seven large amputations (limbs), including 12 of the thigh, and 15 small ones (fingers or toes)—in all 62 cases ; 10 osteotomies ; 26 excisions of joints, including 2 hip-joints and 12 knees, 13 resections in the continuity of bone ; and 33 necrosis operations. Thus there were 144 operations involving bone. Not one of the cases had a fatal result. Many other minor operations were performed in the wards during the same period, but they are not included. The total number of patients in the wards during this period was 1175, and the total mortality from all causes was only 36, which gives about 3 per cent. There was not a single death from pyæmia or septicæmia or erysipelas.

The above opinions, well fortified as they are with extended experience and good results, are only quoted to show the existing tendency to discard the spray, as an indication of a loosening hold on rigid listerism.

More recently, an experimental inquiry into the value of the antiseptic spray by Dr. Mikulicz in Langenbeek’s Archives of Clinical Surgery, lays before us some results which claim our attention here.

He lays it down as a proposition in the outset, that the original theory on which Lister’s treatment of wounds is founded is not absolutely correct. †Two remarkable facts stand to controvert this theory. *First*. Viable elements of coccobacteria are found beneath the carbolic dressings, even in cases that have run a faulty course. *Second*. The Listerian precautions do not by any means suffice to keep out of wounds, or to destroy, the germs as has been shown.

A very brief survey of the theory of wound-infection may be of service. Starting from the acknowledged fact that bacteria play

*Med. Times and Gazette, December 18th, 1880, page 699.

†Med. Times and Gazette, March 5th, 1881, page 276.

an active part in the disturbances caused by wounds, and that the infection of wounds is brought about by the invasion of living germs, it becomes necessary to inquire how it is that bacteria at one time appear harmless, while at another one form of wound-fever is produced, and another form another time. Various views are held. Billroth and Nägeli believe that bacteria of a single species may produce various manifestations, according to the *soil* from which they come, and to the chemical infection-elements with which they are or are not invested. By acclimatization to their former sources of growth these bacteria assume certain characteristics, which, however, can again be lost under suitable conditions. In consequence of this power of adapting themselves (to circumstances), as also of the chemical-infection material which clings to them, these for the most part indifferent bacteria become "infective" (Billroth), and so acquire the power of setting up in a wound a specific infection. Cohn, Koch, and Klebs, on the contrary, believe in a large number of species and varieties, each of which possesses a specific mode of action.

Leaving all such unsettled questions on one side, it may be said that bacteria can affect a wound, and hence the entire constitution (1) in a purely mechanical manner, partly by irritating the tissues by their movements, or even completely and directly destroying it (the interesting experiments by Eberth, Orth, and Frisch on inoculation-keratitis leave no room for doubt that the purely mechanical irritation of germ vegetation may to a certain extent damage living tissue); (2) chemically, either by the withdrawal of nutritive materials from the surrounding tissues, for purposes of their own growth; or in consequence of the injurious influences of the direct or indirect products of tissue-metamorphosis.

In considering the subject, two factors have to be taken into account—the bacteria and living tissue. It is only in the dead subject, or in portions of tissue which have been removed, or in the secretions or excretions, that the bacteria can be considered alone; while in the living organism both factors come into play. The vital energy of both these elements is so variable that an over-abundance of condition presents itself, which has to be analyzed. Taking the living tissue first of all, among individuals and among different animals. Dogs, cats, and, as it appears, flesh-eating animals, with-

stand severe operations much better than vegetable-eaters. Man stands about midway between the two ; while again, there are many differences, even in the same species, which depend either on age, sex, or idiosyncrasy, and which led the older surgeons to explain different results of treatment on these grounds. It is true that these conditions, under the influence of antiseptics, make themselves less felt than formerly : and thus the results of amputations among other operations) during recent years show less variations for age than was formerly the case. This, too, is equally true of individual tissue as of the whole organism. The skin and mucous membranes afford an extraordinary protection against the entrance of these bacteria. The blood too—a fluid tissue—can destroy a considerable quantity of what would otherwise prove dangerously infective. An exception to this rule, however is found in the *Bacillus anthracis*. On the contrary, how freely is the loose connective tissue open to these germs ! Thus incisions into the lips heal without any sepsis by the first intention, while the loose cellular tissue in the floor of the mouth is most dangerously liable to septic infection. Neither must the nature of the injury be left out of consideration in estimating the influence of bacteria on the different tissues, nor the stage at which they gain access. Good healthy granulations form an excellent protection against them, though not absolutely reliable, for erysipelas and diphtheria may attack any wound. It must also be remembered that the surgeon may himself be responsible in consequence of injudicious interference. Too much pressure, over-much tension, deeply penetrating sloughs—all tend to depress the power of resistance of the tissues.

Secondly, the power of development which the bacteria possess depends not only on their inherent qualities (whether in a moist or dry condition), but also on the physical and chemical conditions which surround them. Thus, bacteria coming from a septic fluid carry along with them a certain chemical ferment, by which direct contact changes are brought about the tissues independently of the bacteria, and in consequence of which the bacteria gain an undue advantage over the living cells. Thus the direct infection of the wound previous to the proliferation of the bacteria, and perhaps also an increased intensity in the poison itself, may serve to explain the rapid intensification of the process which is found in certain diseases.

The danger of this variety of infective material can be influenced by antiseptics in two ways—either by destroying the chemical ferment, or by reducing the vitality of the bacteria. The action of disinfectants varies in these respects. Thus, glycerine renders the germs innocuous, but it preserves the septic (chemical) ferment. Further, the danger of infective materials can be very much reduced by drying, and thus it happens that bacteria originating from an infective fluid, are less dangerous when dry than when taken direct from the fluid itself.

Hence we may divide bacteria into—

1. Pathogenic Bacteria—viz., such as originate from infective fluids, especially wound secretion; and these may either be moist or dry.

2. Indifferent Bacteria—viz., such as by antiseptics have had their vitality more or less reduced and their infectious character destroyed; these may also be moist or dry.

In all cases it is desirable to distinguish whether infection of a wound has been brought about by pathogenic or by indifferent bacteria. In the former case we speak of contact infection; in the latter we may call it spontaneous infection, bearing in mind, however, that it was due to the presence of the bacteria, and that these indifferent bacteria, under given conditions, may again acquire vitality, and with it the power of setting up decomposition-changes. This is acquired by allowing secretion from wounds to collect, and hence one of the most important agents to prevent it is to provide ample drainage for all secretions the moment they are formed.

We may now come back to the question, whether *direct* infection of a wound by the air can be proved: for at present it is only suspected. In order to make this part of the subject clearer, the *quantity* and the *quality* of the air-germs must next be considered. In the opinion of many, the *quantity* of the germs which may get into a wound appears to be irrelevant. The majority of observers seem to think that a single germ can cause as much mischief as an entire colony; falling back, doubtless, on their rapid development in artificial fluids, and applying this knowledge without hesitation to the living tissues. This, however, is not the fact; for germs can only develop with the concurrence of the tissues themselves; and thus while a single one would be overcome by the living tissues, a

colony of them, on the contrary, would get the best of the struggle, and breed. Nägeli lays great stress on this point in relation to the etiology of different forms of infection-diseases. Buchner has estimated that the air of the Plant-Physiological Institute in Munich, which is rich in germs, contains ten bacteria per litre, according to which estimate a ward or operating theatre would contain between ten and twenty millions, according to size. Compared, however, with a drop of fluid from an infected wound, this number is remarkably small; and thus the danger of infection through the air, as compared with the dry infection through the fingers, sponges, and dressings, is so slight as to be hardly comparable. Neither is the quality of these germs of very much importance, bearing in mind what was said as regards their being in a dry or moist condition: the former for their reproduction, require not only a more favorable soil, but also a longer time, and their amount too is much larger than moist germs; for the moisture would tend to be dried up by the currents of air to which they would be exposed; and thus one may practically regard all air-germs as dry germs—dust, in fact. This fact is well known to all those who have occupied themselves with the breeding of bacteria.

It would be of great interest to know whether among the air-germs any specific infection-material is to be found. Nägeli has suggested that, in the process of drying, the pathogenic bacteria may lose their specific character. But as yet it is impossible to answer the question accurately, for various kinds of germs no doubt conduct themselves differently in this respect. As regards the germs in cow-pock lymph, and also in anthrax, the specific infection lasts for months, or years even. Whether the same property holds good in erysipelas or diphtheria, it is impossible at present to say. There is even no direct evidence that pathogenic air-germs exist at all, the experiments of Cohn and Miflet being entirely negative. Indeed, the manner in which infectious materials get into the air and become air-germs is quite a matter of conjecture. These germs, too, when dry, are so minute and so light that the slightest current of air suffices to keep them on the move, and thus they are proportionately unlikely to settle on wounds. On the whole, therefore, both on experimental as well as theoretical grounds, it must be conceded that the importance of the air as a source of infection has

been overrated, and that quantitatively as well as qualitatively it ranks far behind all other infection sources.

It being generally conceded that the entire treatment of wounds by the Listerian method is based upon the germ theory.*

In a letter to the *British Medical Journal* Mr. Holmes says, "The sum of the whole matter is this: There is, I believe, a very large number of practical surgeons who, like myself, are thoroughly convinced of the value of drainage and antiseptic dressings, and who, like myself, are glad to confess that obligations to Mr. Lister's teaching, but who are not convinced by the evidence of the relative superiority of his own method of applying them, which he has produced up to the present time. Far, indeed, from being prejudiced against either the method or its author, we are warm friends of both, and only anxious to do the best we can for our patients. We believe the Listerian treatment rests upon and is inseparable from the germ theory. We see no proof of that theory in the reasoning heretofore adduced by Mr. Lister or Professor Tyndall. Nor do we see any proof of it in the moral phenomena on which Mr. Lister rested his chief argument at the late discussion, since, whatever reception we give to such facts,—if we allow them to be as absolutely unheard of as Mr. Lister claims, yet they are only previously unobserved phenomena in the healthy process of union,—they do not touch the question of the germ theory. Still less can we allow that a question so difficult and so purely physical can be settled by a bare enumeration of death rates. But real statistics, showing the normal progress of cases treated by the Listerian, by the simpler antiseptic, by the open method with drainage, and on other plans if they showed a specific difference in the cases treated by the first method, would be of great importance toward a settlement of the question. If it be too much to hope that the surgeons of King's College Hospital (Lister's Hospital) will—as they certainly could—collect such data, may we not look for them from some other quarter?"

The next question then to be considered, Is the spray able to set aside the danger of infection by the air, and can it not be replaced by a simpler method? Interesting experiments with hand and

*Journal Materia Medica, April, 1880, page 65.

steam spray apparatus, to determine this question are thus formulated :

1. Whenever fluid from a pulverizing apparatus falls to the ground, it will there carry with it any dust which may be floating about. 2. The amount of dust so precipitated depends at all points on the amount of the precipitating moisture, and is directly proportional to it. It may be said that this condition may obtain for the powdered charcoal, but will not for the germs suspended in the air, which are extremely minute. The coarser part of the charcoal under any circumstances would fall to the ground in a few minutes, while the finer would not. So, too, the germs, the finer they are (while dry), the less likely are they to settle on a wound ; but when once absorbed into the watery particles of a spray they must of necessity be carried wherever these watery particles go. This being the case, the spray must be injurious to a wound by bringing upon it a larger amount of the germs floating about in the air than would fall on it without the spray. Buchner, in his criticism on the spray, remarks that it is quite immaterial how many bacteria get on to a wound, provided that before doing so they are rendered harmless. But this only proves what Buchner regards the mechanical effect of the spray as *harmless*, rather than as *useful*. And this opinion is now generally held, indeed, all the usefulness of the spray can be obtained, without any of its disadvantages, by antiseptic irrigation of a wound."

As to whether the spray is or is not a necessary part of the Listerian method, is a question which at the present time is much discussed, especially in Germany. There are two points of view from which this question has been looked at. First, does the spray really render inert two causes of fermentation which we know to be present in the atmosphere ? and secondly, whether it does so, or no, is it necessary, or may it be replaced by some more convenient means ?

Last year Stimson and others published a series of experiments, which, in their opinion, showed that the spray was not effectual in destroying all living particles present in the atmosphere. In Stimson's experiment by sweeping the floor of the room in which the experiments were carried on, or in some other way the grosser particles of dust were raised and mention is specially made of the large

masses. On the other hand experiments have been performed, as for instance, by Cheyne which show that acting in the ordinary air of rooms or wards the spray is apparently effectual in destroying all traces of life floating in the ordinary, but little disturbed atmosphere. From this point of view it is simply a question of size of the particles which the spray meets with. If these are minute and little compact they will be disinfected—if large and dense as will be the case if the floor be swept during or immediately before the experiment, one could not expect the spray to soak through them sufficiently during their transit. There is another way, however, in which the spray may act on these larger particles, viz. : by bedewing the surface of the wound, and thus keeping up the action on the dust which began during its transit through the spray. In fact, the particle of dust already moistened, while passing through the spray, falls into a thin layer of carbolic lotion and thus disinfection is completed. As a rule, however, particles of dust which are small enough and light enough to float about in the atmosphere, such particles as are present in ordinary rooms or wards will, as far as we can judge, be acted on directly in a sufficient manner by the spray, for they will not fall straight through it, but will be carried along with it after being moistened with carbolic acid before reaching the wound.

Seeing, then, that the spray is really of use in one or other of the ways just indicated, the second question arises as to whether it is necessary, or whether some other mode of manipulation might not be more conveniently substituted for it. That the spray is not by any means absolutely essential for antiseptic work, and that aseptic results may be obtained without its use, is at once evident from the experience of Mr. Lister himself. For it must not be forgotten that it was only after several years practice of antiseptic surgery that Mr Lister adopted the spray, and that before that time he had been performing operations only justifiable when the causes of fermentation can be excluded from wounds. He only adopted the spray as a more convenient and certain mode of obtaining the same results which he had previously got. Before the spray period, however, he had used various precautions, such as irrigation of the wounds with carbolic lotion or carbolic oil, etc.

Mr. Lister's original method has of late been revived and advo-

cated in Germany, more especially by Prof. Trendelenburg. For several years he has given up the use of the spray in his practice, and resorts instead to frequent irrigation of the wound with the lotion. When he has concluded the operation, he washes out the wound thoroughly with carbolic lotion, and after stitching it up, he frequently injects it by means of a syringe. A similar method has been practiced by Von Bruns and advocated by Mikulicz. The results obtained in this way are, as is only to be expected, very excellent; but we doubt whether we have here a better or a more convenient method than by the use of the spray itself; indeed there are two serious objections to it. In the first place, as Wernich has pointed out, the element of certainty with regard to the result is very much diminished, for one can never be sure that every particle of dust which has fallen on the wound during an operation is thoroughly acted on by the carbolic acid at the end, and it is as likely as not to happen, that the particle of dust which escapes this action is a living particle, and may set up the fermentation in the wound. And then in the second place, this free application of carbolic acid is by no means a desirable thing, for by it the tissues are unnecessarily injured and irritated, while the chance of an inconvenient absorption of the acid, and consequent carbolic poisoning, is very much increased. On the other hand, the spray is really not the inconvenience which some make it out to be; it requires no extra assistant; it does not obscure the field of vision; it does not irritate the wound so much as the other method, while at the same time it adds a considerable element of certainty to the result. The form which discussion is apt to take is a useless one, the fact being, as we have attempted to show, that, in the present state of science, if the spray is dispensed with, some other means ought to be adopted in its stead.

Whether the spray remains the best means of attaining the wished for results, purification of the air, or whether it be replaced by some other more convenient method, does not affect in the least the truth of the great principles of antiseptic surgery as enunciated and taught by Mr. Lister.—*Editorial in British Medical Journal*.

In an article by Prof. Tyndall in *New York Times*, Jan., 1881, on "Bacteria" we find the following:

One of the most active and dangerous forms of bacteria, the

micrococcus, is about the shape of the head of a small pin ; or, rather, when magnified 800 times, it looks like this : o o o o o. Another, the true bacteria, or rod-like particles, are about the following size and shape : ∞

But the principal point is to find out what substances or medicines will destroy them. Quinine will not, for bacteria will live and flourish on a solution of twenty grains to two drachms of fluid. Nor will camphor, for they live on a solution of thirty grains in two teaspoonsful of fluid. For five days they were seen swimming about among the pieces of camphor, and increasing immensely in numbers. Ten drops of carbolic acid in two drachms of fluid will not kill them. They also flourish in a solution of tar, and will swim about for six or more days between particles of ten grains of calomel in two teaspoonsful of fluid. One drachm of laudanum in two teaspoonsful of fluid filled with bacteria will only commence to benumb and kill them at the end of six days.

They lived for ten days in a solution of tincture of nux vomica in two drachms of bacteria fluid. Tannin is the first remedy which has a decidedly destroying effect upon them. It will kill them in two hours ; and although they will come to life again after being frozen in ice, and boiled in hot water, yet they will not do this if tannin is applied. Chloroform seems to kill them, but they will come to life again—they will live in a solution of one drachm of chloral in two of water, a concentrated solution of copperas will kill them ; also chlorine water, dilute muriatic sulphuric and nitric acid.

Experience confirms that which an appeal to first principles suggest ; and we are informed that during the Franco-German war, although the hospitals stank of carbolic acid, yet wounds were not healthy. Although I believe that the purification of air which has once been defiled is a hopeless task, yet it by no means follows that disinfectants have nothing to do with purity of atmosphere. It is open to us to abstain, in a very large degree, from rendering the air impure.

By the efficient application of disinfectants to foul surfaces, we may hinder defilement of the atmosphere of our dwellings. One of the main functions of a serviceable disinfectant is that it shall be antiseptic ; that it shall postpone decomposition and putrefaction

until a convenient season. A good disinfectant should not itself defile air, neither should it be dangerously poisonous nor corrosive. There is a very common substance which has long been used to hinder putrefaction. It does so only in a concentrated form. It has no smell; it is not poisonous. It can hardly be said to be corrosive. Its name is common salt. I hold that this substance and its analogues—the chloride of calcium and the chloride of magnesium—are the most available general disinfectants.—*British Med. Journal*.

In remarks upon the comparative value of salicylic and carbolic acids, Prof. Thursch claims superior antiseptic properties for the former—the latter being more irritating and inadequate to the disinfection of deeply-seated ulcers. In the treatment of complicated fractures prefers salicylic acid, irrigation and salicylic cotton as a dressing to Lister's method of bandage, especially in field service. Both these acids have been pronounced inferior to petroleum in destroying maggots developed in suppurating wounds. Lister in reply to objections to his system admits that there may be carbolic acid poisoning in rare instances and admits salicylic acid the best substituted for carbolic, and alludes to salicylic jute dressing under the carbolic acid spray. Not long since I was called to see a gentleman severely cut with a knife—the wound extending across the side, face and neck from the angle of the mouth to a point under the ear. Being professionally engaged at the time of the accident I was informed by the medical attendant who dressed the wound that the hemorrhage was frightful and that interference would be dangerous. On the following day, I detected a slight movement about the anterior angle of the wound—the dressing being removed, quite a number of maggots was found deeply embedded in this ugly wound gaping its entire length—about two inches—the under-flap hanging down on the neck—the carotid with its covering entire, distinctly seen. I used a strong solution of carbolic acid to destroy these pests, and failing, applied liquid honey, which I had used frequently before in similar cases, and soon freed the wound of them. After washing with a solution of carbolic acid—nine stitches (silk) inserted, a dressing made by folding old soft cotton cloth, wet with carbolic acid solution applied constantly—the wound healed with slight suppuration. I was applied to, a short time ago, for a prepa-

tion to destroy maggots in a sloughing wound made by the bite of a horse upon a cow's back. I ordered a strong solution of carbolic acid with instructions to syringe the wound thoroughly and let me know the result. It failed to accomplish the purpose, but kerosene oil not only displaced but killed every one. As to the relative value of disinfectants, such as heat, chlorine gas, oil of vitriol, permanganate of potash, corrosive sublimate, sulphuric and carbolic acids, &c., the *British Medical Journal* contains an article which reads as follows :

But if the heat be only gentle, and if the chemical agent be dilute, there is absolutely no reason for believing that, by the employment either of the one or of the other, we are so much as contributing towards the destruction of infection. There is a difference not only in degree, but even in kind, between the action of the same chemical when concentrated and when dilute. Concentrated sulphuric acid will convert cane-sugar into a lump of charcoal, but dilute sulphuric acid transforms it into dextrin and glucose, and, curiously enough, fits it for undergoing septic changes. So, again, very dilute bleaching powder has actually been found to favor the development of certain low forms of life; and Pettenkofer, as is well known, has found that germs whose development had been arrested by carbolic acid, start into life when the carbolic acid is still further diluted.

In the practical employment of disinfectants, the fact that dilution frustrates the action of a disinfectant has been very generally lost sight of.

I can bear testimony to the value of tar water and tar ointment having used them frequently in surgical cases. The following case may be of interest as I am not aware of a similar case being recorded :

The patient, by a fall from his horse, received a severe wound about the knee-joint. I was called about a week after the accident and found all the tissues two inches below the patella and as far above, extending on both sides of the joint sloughing away. The patella deprived of periosteum, almost black pus oozing from several points. I feared amputation would be necessary to save the thigh, but my patient objecting, I applied acids to the diseased surface of bone to hasten exfoliation, and confined the treatment to carbolic acid wash and tar ointment. The wound healed by gran-

ulations quite slowly, until it reached the patella which projected at least one-fourth of its thickness above the surrounding tissue. How to get clear of the bone diseased, and even the exposed parts, was the trouble. I determined to operate, and assisted by Dr. C. T. Murphy, by means of strips of cloth, pressure was firmly made on the tissue immediately around the patella, and I amputated half the thickness of the bone, freshened the edges around and continued the tar dressing.

The bone was finally covered, although it took several months, aided by additional medical skill and attention to accomplish the work.

Whether we are inclined to adopt Lister's views as to the germ theory, I am satisfied the assiduous attention absolutely essential in carrying out his recommendations as to dressing, cleanliness, &c., has contributed largely to success in surgical operations and enlarged conservative surgery. Such attention is capable of preventing septopyæmia under almost all circumstances, and is destined to hold a high place in the surgery of the future.

CANCER AND SURGICAL INTERFERENCE.

Surgical operations in cancer have for years engaged the closest attention of our most scientific medical men and in this progressive age are still involved in no inconsiderable degree of obscurity. I present some points entitled to favorable consideration, emanating as they do from experience of superior ability.

It is useless to refer to the minute details and recorded opinions of Sibly, Virchow, Rindfluch, Volkman, Velpeau, Robert, Trosseau, Labut, Muro, Macfarland, Broca, Gross and others. Many surgeons favor the early operation for cancer as a radical cure, or diminishing the chance of recurrence while others oppose interference as having a tendency to aggravate the difficulty and hasten fatal issue. These ideas of interference are principally based upon one of the two opinions entertained as to the origin of cancer, whether regarded in its elementary form as specific and invaluable, or heterologous structure, an expression of a constitutional affection, or the contrary, as a local disease, becoming constitutional by propagation either through the lymphatics and veins or by transplantation. Various opinions are entertained as to the malignancy of

epithelial growths, some contending they are non-malignant, others, identical with cancerous tumors, returning after extirpation, not only on the original site: but like cancer, at a distance from it. alike in all tissues, the treatment by caustic, the canterly and knife, the same. Tumors, which have all the characteristics of cancer have failed to return after extirpation and others pronounced innocent, have returned with fatal effects. These errors (if errors) in diagnosis, have been made by some of the best microscopists in the world. Mayo says: "In carcinoma of the mamma, even when the operation is performed under the most favorable circumstances, recurs in ninety-five cases in every one hundred." Dr. S. W. Gross says, "Although carcinoma of the mammary gland may progress slowly, it, none the less destroys life eventually if it be allowed to pursue its course uninfluenced by an operation—the average duration of the disease being only twenty-seven months. A carcinoma is not encapsuled, its cells invade the surrounding and adjacent fasciæ, muscles, fat and skin which are converted into so many separate centres of new growth and latent zones of infection. Hence in the operation, the infected neighboring tissues and lymphatic glands must be completely gotten rid of before the disease can be eradicated." He regards surgical interference in mammary sarcoma favorably.

From *Medical Record* we have a case of removal of carcinoma of mammary gland reported by Neftel as follows, viz.:

This has been removed from a gentleman sixty-five years old, who a year ago consulted Nélaton and other distinguished French as well as English surgeons with regard to a tumor in the left mamillary region. They all advised him not to undergo an operation, for it would be dangerous and useless. But Dr. Sims, who was at the time in Paris, extirpated the tumor, and the wound healed mostly by first intention and partly by granulation. The patient was quite well until recently, when he observed enlarged and indurated glands in the left axilla. He again consulted Dr. Sims, who last week performed the operation as successfully as the first time. The patient was not put under the influence of an anæsthetic; every diseased part was carefully removed, and no hemorrhage occurred during the operation. The wound is now healing by granulation, and the patient is doing very well. I have made the microscopical exami-

nation and found cancer of the axillary glands. In this specimen can be traced all the stages of development of cancer. In the recently affected glands the connective tissue is increased and its cells are proliferating. In those previously attacked the interstitial tissue has already disappeared, making room for cellular elements alone, and in glands still long affected the cells are undergoing cheesy metamorphosis. The cells present a polymorphous shape, with large nuclei and several nucleoli. But generally speaking, the appearance alone of the cells, their shape and size, is not characteristic on the nature of a tumor. There exists no specific cells—cancer cells or tubercle cells—as was formerly thought by Lebert and is still now admitted by the French school; but it is the type according to which the cells are arranged, their relation to the interstitial tissue, and the homology and heterology of the new formation, which show its nature and the degree of malignity.

Another point of interest in this specimen is its relation to the general condition or the system. As we all know, the humoral pathologists consider every malignant tumor as the expression of a constitutional affection, of a diathesis or dyscrasia; whereas the modern pathologists, on the contrary, take it as a local disease, which can become constitutional by propagation either through the lymphatics and veins, or by transplantation (a detached particle infecting a new place).

The patient from whom this specimen has been taken stated that he first noticed a pimple, which he ascribes to the irritation caused by a heavy pocket-book he was in the habit of carrying on the left side. This pimple gradually enlarged, but remained local for a long time, when the axillary glands became affected and from these latter the contagion would have been propagated through the efferent lymphatics into the thoracic duct and general circulation.

In 1862, the late Dr. H. A. Bizzell and myself removed a cancerous tumor of the mamma. The neighboring glands were much involved, and the general health feeble the disease returned in a month and the patient survived about three months.

In 1867 I operated upon a tumor which I felt satisfied was genuine carcinoma of the breast. The entire gland was diseased; but the axillary gland was quite natural in appearance and to the touch.

The entire mamma, with cellular tissue beneath, was removed, and my patient recovered and has since borne and nursed two children from the sound breast.

Report from Surgical Society, Paris, December 15th, 1880 :

Dr. Le Dentu reported several personal observations on *epithelioma*. In the case of patient first operated on, a relapse had occurred almost immediately, and death occurred ; a second had been carried off by a frightful hæmorrhage ; a third was attacked by an epithelioma having a very fœtid odor, having all the appearance of a gummatous ulcer, which rapidly involved the two anterior thirds of the organ. There was no apparent glandular degeneration. Dr. LeDentu removed at one operation the tongue and one of the anterior pillars of the vault of the pharynx. The operation was at first a wonderful success, the swelling of the stump allowing the patient to speak freely. Later on the disease again made its appearance and carried off the patient. All the patients treated had been extremely affected. The last patient operated on had been attacked by *psoriasis lingual and buccal*, and had at the same time a lingual epithelioma of fungoid variety. This cancer was situated on the right lateral half of the tongue. The tongue was removed by means of the electro-cautery, in 1876, and the patient has not as yet had the least relapse. There was no doubt about the diagnosis in this case, which had been agreed on by Verneuil and others.

Dr. Perrin had removed six epitheliomas in eleven years, in patients of all ages and sexes. There was no glandular degeneration. He had sometimes used the *écraseur*, sometimes the thermo-cautery, sometimes the galvano-cautery. The result was, as a rule, good ; lasting in most cases without relapse five or six years. He then narrated the case of a lieutenant-colonel of cavalry, attacked by epithelioma and lingual psoriasis ; on one psoriasis, he said the scales had fallen, and at this spot the white, shining hue of psoriasis had been replaced by a livid red surface, which latterly became markedly indurated. He then operated. The result was good, but two years later the patient was carried off by a frightful relapse. Two categories of epithelioma of the tongue ought to be established, Dr. Perrin thought : 1st. Those in which an operation was practicable ; 2d. Those in which it should not be attempted. Those which should not be operated on were : First, the cancer with

glandular degeneration ; second, the cancer which affects the mucous membrane, that interstitial structure which develops in the superficialities. He would not operate if the cancer showed evidences of having invaded distant parts, and would have recourse to the sub-hyoidean operation but rarely. He preferred a lower incision with a white-heat knife.

Dr. Le Fort would not operate if the cancer involved the mucous membrane beneath the tongue.

Dr. Despres believed that long survivals after the operation were exceptional. He agreed with Dr. Perrin as to the best instrument to operate with.

Dr. Trélat claimed that topical treatment of the tongue was useless ; that the question both of the mode and means of operation should be governed by the induration indicated.

Dr. Verneuil—The question as to whether cases having glands affected should be operated on, would be best decided by the seat of the affected glands. He believed in the sub-hyoidean operation, because by that the glands would be easiest removed.

The local origin of cancer, by Hutchinson :* “ I have tabulated upwards of one hundred and ten cases of cancer of the lip occurring in hospitals, and find among them 106 men and 4 women, while of the four latter, two had adopted the habit of smoking and in one other the diagnosis of the disease was doubtful. In cancer of the penis, occurring as it usually does in the subjects of congenital phimosis who have been negligent as to cleanliness ; in cancer of the tongue or cheek, induced by the long-continued irritation of a broken tooth ; in cancer occurring in the old cicatrices of burns which have been irritated ; in melanosis supervening upon congenital moles which have been scratched : and in the not infrequent transformation of an old syphilitic ulcer upon the tongue or os uteri into one of a malignant nature. We have instances of cancer induced locally by different forms of local irritation.

In the case of a gentleman, the greater part of whose tongue I removed for epithelial cancer, about three years ago, and who died two years later of return of the disease in the glands of the neck, there was the history of a syphilitic sore of several years previous duration.

*Medical Times and Gazette, 1881.

In a case of carcinoma of the cervix uteri which I saw some years since, Dr. Oldham assured me that the sore had originally been an ulcer of syphilitic origin; that he had several times seen malignant disease supervene in cases of malignant character." He alludes to a case under Mr. Paget's care in which a man with stricture of urethra had numerous fistulæ in his scrotum and perineum in whom cancer of undoubted type developed itself about the orifice of one of the anterior fistulæ and insists that epithelial cancer is as true a cancer as is the scirrhus form differing mainly in that it occurs in parts which usually are easily accessible to the surgeon. He cites cancers of the tongue, female genitals, lip and skin terminating so rapidly, if we date from the time of ulceration. "A strong argument in favor of the local origin of cancer is that when it commences in a part which can be watched, the first effects of irritation are not the production of a cancer, but simply of an irritable sore or warty induration. Many so-called "cancers of the lip" are at the time of their removal doubtfully cancerous, but just in the transition stage between common inflammation and malignancy." I have often seen warts or small scabs, particularly about the face apparently harmless until irritation by constantly feeling and picking the part so exposed converted into an ugly and obstinate sore presenting all the characteristics of cancer.

There is a case now, in my section, of cancer of the tongue, more than one-third destroyed, which the patient insists had its origin from a sharp point of tooth constantly irritating the organ. Among the recent remedies brought into notice for the treatment of cancer, Prof. Clay has made an attempt to introduce "Chian turpentine" as a specific but has met with entire failure, as will be seen by reference to an article, *American Med. Bi-Weekly*, and other papers. F. K. Green says: "I am somewhat surprised that Professor Clay's communication in the *Lancet* of June, 'On the Treatment of Cancer of the Female Generative Organs' by Chian turpentine, has evoked no reply; and in the absence of remarks from any abler pen than mine, I feel constrained to draw the attention of your readers to what I consider very serious inconsistencies in the professor's report of his cases.

'Case 1 is described as 'scirrhus cancer of the cervix and body of the uterus. The uterus was so extensively destroyed by the

cancerous ulceration that its cavity readily admitted three fingers. On the fourth day of treatment the os was quite contracted, and would now scarcely admit the finger.'

'It would be interesting to know how this marvellous contraction was brought about in four days, especially as Professor Clay thinks that the remedy acts by dissolving all the cancer cells, leaving the vessels to become subsequently atrophied." Surely if this is the supposed action of the drug, we should expect, as a first consequence of the treatment, that the cancerous ulcerated cavity would be enlarged, not contracted. In such extensive cancerous ulceration as is described in this case, we naturally assume an invasion by the disease of at least the fibro-myomatus elements of the cervix, which tissues we fairly assume to have atrophied and disappeared. Yet we are expected to believe that they still exist, and exist in full vigor; and, what is more incredible, we are asked to believe that in the marvellously short period of four days they cause the os to contract, so that it will scarcely admit the finger, where only those four short days before, three fingers were readily inserted.

STONE AND OPERATIONS FOR.

The frequent occurrence of stone for the past few years in certain sections of the country should be a subject of inquiry.

Dr. Thomas F. Wood in a communication alludes to this fact in his vicinity mentioning four cases operated upon by Drs. Love and Murphy—four in his own practice—one a female. All these cases occurring in the past four years. Lateral lithotomy was the operation performed (except in case of female) and all resulted successfully. Several cases have come under my own observation in the last two years—one a small boy about twelve years of age—he had been under treatment for several days before I saw him; was suffering excruciating pain and having passed no urine for four days, the bladder was enormously distended. An examination (under chloroform) revealed an impediment quite hard in the lower part of the urethra, with a probe slightly scooped at the end, and by carefully manipulating I succeeded in forcing it along the canal until within a short distance of the external meatus and was compelled to make a slight incision for its discharge. The stone was the size of a small hickory-nut, quite hard and presented the appearance of oxa-

late of lime. I expected a free discharge of urine but was disappointed. I introduced a catheter with some difficulty and drew off a large quantity which gave relief—no symptoms of the trouble since. Some two months ago, presented me with a handful of small stones about the size of large mustard seed and stated that he had been in the habit, for several months, of passing quantities of such gravel without pain and with but slight inconvenience. There is a very interesting report in *Southern Clinic*, July, 1879, "Lithotripsy and Lithotomy," 63 cases of stone in old men averaging over 50 years of age in which Thomas Thomson used the former method without a fatal result. "In cases of small stone, requiring few sittings, it answers a better purpose than lithotomy—a correct diagnosis should be made early in the disease, before the stone has attained much size. Of the two operations with the knife above and below the arch of the pubis, the low operation has been usually relied upon more recently supra-pubic lithotomy or the high operation has grown in favor. In NORTH CAROLINA MEDICAL JOURNAL, November, 1878, are two successful cases of supra-pubic lithotomy recorded. *Medical Times and Gazette*, a case by Hutchinson, of supra pubic operation—result fatal and not favorably impressed. Discussion on the occasion did not favor the operation. Prof. S. D. Gross estimates the proportion of fatal cases to be one in 4 and 3-5ths—principal cause of death being urinary infiltration and peritonitis. The high operation presents many seeming advantages, being less complicated, more easily performed and causing less injury to the genito-urinary organ, and the recent statistics of success entitle it to confidence, and in my opinion will grow in surgical favor.

LIGATURES.

Animal or organic ligatures, particularly cat-gut, demand passing notice. In a physiological and pathological point of view under Lister's method—this ligature is either encysted or absorbed and the risk of secondary hemorrhage is considered far less. Watson in Glasgow Royal Infirmary uses ligatures of Lister's prepared cat-gut in all cases of amputation. Stump does not suppurate but slightly and no case of secondary hemorrhage.

This ligature (*Clinical News*, March 6th, 1880,) is condemned

by Goodell. In his opinion, in ovariectomy and the intra-peritoneal mode of dealing with the stump, fine carbolated silk is better, cat-gut being a treacherous ligature and not to be depended upon ; apt to be untied or absorbed before occlusion, or may slip. Keith, of Edinburgh, (*Amer. Jour. Med. Sciences*, 1873,) performed ovariectomy 150 times ; 84 recoveries in the last 100 cases ; the last series of 50 cases show eight deaths. Lister's animal ligatures were used in all these cases. I see no reason why cat-gut should not be absorbed as readily as soft parts and bone. Having never used the ligature, I feel a degree of hesitancy in offering an opinion. I have invariably used silk when convenient and have often had ligatures to remain for a considerable time before being discharged and often enveloped in the wound and have never had cause for alarm from that alone.

We should be on our guard as to new ideas and remember that each and every medical man has his peculiar hobby and in his zeal and enthusiasm, may claim too much.

NERVE-STRETCHING IN NEURALGIA.

Dr. Kocher relates, in the *Correspondenzblatt für Schweizer Aerzte*, November 11th, 1878, the case of a man aged 32, who had for seventeen years suffered from neuralgia of the right supra-orbital nerve. The attacks, at first rare, afterwards became more frequent, until at last there were only brief intervals of freedom from pain. All the ordinary therapeutic measures has been tried for years without success. Dr. Kocher laid bare the nerve and three of its branches by an incision along the upper border of the orbit, and stretched it forcibly by means of an aneurism-needle passed under it. The healing of the wound was attended with abundant suppuration. From the moment of the operation, the patient was free from pain, and the neighborhood of the supra-orbital nerve was anæsthetic. The patient was last seen three months after the operation ; he had had no return of the pain ; sensation was diminished over a space ten *centimètres* in extent, but was otherwise perfectly restored. After neurectomy, paroxysms of pain are usually observed during the first few days after the operation. As these were absent in the present case, Dr. Kocher concludes that the lesion of the nerve is less when the nerve is

stretched than when it is divided. The value of nerve-stretching as a substitute for excision will be greater in neuralgia of the second and third divisions of the fifth nerve, as here a much smaller wound will suffice.—*British Medical Journal*, October 18, 1879.

NERVE-STRETCHING IN TETANUS.

M. Thomas, of Tours, has forwarded to the Society of Surgery, of Paris, at its sitting of February 19th, the report of a case of a man aged 28, who wounded the ball of the thumb by falling on the fragment of a bottle. Some days afterwards, *tetanus* appeared, with *opisthotonos* and *trismus* very marked, difficulty in swallowing, and convulsive contraction of the flexors of the arm and hand, except the thumb. To destroy the effect of the inflammation of the ends of the nerves, and their compression by the cicatrix, M. Thomas practiced stretching of the median nerve at the level of the spot at which the humeral artery is usually tied under the biceps. The nerve was isolated and placed over a director and stretched. The patient felt himself immediately relieved. Two attacks of convulsions appeared afterwards in the course of the day, and then a third after two hours of sleep. The *trismus* and *opisthotonos* had disappeared that evening, and the patient was feeling well, when an attack of delirium occurred, during which he leaped out of his bed and walked about the ward; death followed in the evening. The *post mortem* examination showed that the median nerve was congested at the level of the stretching; a rupture was found of the peripheral filaments of the nerve; the tendon of the long flexor of the thumb had been divided in the wound of the hand.—*Hospital Gazette*.

EXCISION OF THE STOMACH.

A most remarkable case of surgery by Professor Billroth, who, it will be remembered, reported two cases of œsophagotomy—one of them successful—July, 1881.

On the 29th ultimo, Prof. Billroth, of Vienna, excised about six inches of the greater curvature of the stomach, including the pylorus, for infiltrating carcinoma. The patient was a woman, aged 43, mother of eight living children, who was suddenly seized with grumous vomiting last October. Marked symptoms of cancer of

the stomach and stenosis speedily followed. The operation was decided on in consequence of incessant and uncontrollable vomiting which threatened inanition. The operation lasted one hour and a half. There were extensive adhesions to the omentum and colon. Fifty silk sutures were used to unite the duodenum and the remaining portion of the stomach. On the fifth inst., (a week after the operation) the sutures were removed from the external wound, which had united without reaction. The patient was doing well, and was able to take coffee, tea, and other light nourishment. This is the second time the operation has been done. D. Péan did it in 1879, removing a carcinomatous pylorus. In that case catgut ligatures were employed. The patient died on the fourth day.—*Lancet*.

THE SURGICAL TREATMENT OF LUNG CAVITIES.

November 26, 1880, Dr. Fenger performed an operation which, on account of its rarity and importance, deserves a more extended notice than we shall here be able to give. It is to be hoped that Dr. Fenger will publish the report of this case in due time. The patient, an Italian male, had a large gangrenous cavity in the right lung, extending from the second to the fifth rib and from the sternum to the posterior axillary line. An extremely offensive odor, like that of rotten eggs, surrounded the patient, and, in coughing, small quantities of greyish fetid matter were brought up. The cavernous respiration showed the cavity to be in the substance of the lung. No empyema was present. Dr. Verity withdrew, by means of a hypodermic syringe, a thin, greyish, fetid fluid from between the third and fourth ribs. Dr. Hollister very kindly consented to Dr. Fenger's suggestion of making an attempt to save the patient's life by an operation. Consequently, on November 26, the patient having been anæsthetized, Dr. Fenger made a large transverse incision between the third and fourth ribs, and one and one half inches to the right of the sternum, dissecting carefully through the overlying soft tissues, down towards the pleura. When the intercostal muscles were laid bare, an aspirator needle was introduced to ascertain whether or not the subjacent lung was adherent. As the needle did not oscillate comfortably with the respiratory movements, he concluded that there was no fear of opening into the pleural cavity in this place, and consequently the knife was introduced into

the cavity, giving means of escape to a quantity of very fetid matter. A counter-opening mass made at the posterior of the axilla, and, after the evacuation of a pint and a half of fetid matter, the cavity was washed out with a two and one half per cent. solution of carbolic acid. A subsequent cough caused a coherent, yellowish-white, gelatinous mass to appear at the large anterior opening. This slipped back several times into the cavity, but was finally obtained by introducing a large forceps and the index finger into the cavity. A microscopical examination of this mass demonstrated it to be the cyst of a large echinococcus. A large drainage tube was now passed in at one opening and out at the other, and voluminous antiseptic dressing applied. The patient is now in a fair way to recover, and, unless something untoward supervenes, will leave the hospital in a few days.

This is, so far as we can learn, the first case on record of surgical treatment of cavities in the lungs with recovery. The operation has been thrice attempted before; once for a consumptive cavity, once for abscess, and once for gangrene of the lungs but none of the patients recovered. In one case the patient lived for nine days after the operation, the patient is living and in a fair way toward recovery.—*Ex.*

NOTE.—The case kindly forwarded by Dr. Foote (to which reference has been made,) I fear, will be imperfectly presented, as the papers were unfortunately mislaid. A child, subject to epilepsy, accidentally received a severe burn, attended with great sloughing, necessitating amputation, which was successfully performed; since which time there has been no return of epilepsy.

Messrs. William Wood & Co., present to the Delegate to the (London) International Congress, a handsome little volume, peacock-blue covers and gilt edge, containing the programme of the Medical Congress, a historical sketch of the Wood's publishing house and a catalogue of books published by them.

SOME POINTS IN THE TREATMENT OF TALIPES.

Read before the Baltimore Medical and Surgical Society, April
20th, 1881.

By RANDOLPH WINSLOW, A. M., M. D., Demonstrator of Anatomy,
University of Maryland.

The various deformities known as talipes are not only amongst the most common, but also the most humiliating affections to which the human race is subjected. Whilst this is enough to excite the interest of the surgeon, the fact that these distortions tend to become exaggerated with age, and not to be spontaneously cured, makes it a solemn duty upon both parents and physician to use every effort to remedy the defect during early life. Although the patient is not usually precluded from following the ordinary avocations of life ; it happens too frequently, when neglected, that the deformity is an effectual bar to his active participation in social and business pursuits, and in some, fortunately rather rare cases, he is compelled to make his way through the world upon his knees, and never to reach the stature and dignity of a man. In this paper I intend only to call attention to a few points which I have found to be of practical value.

One of the first and most important considerations which will claim our attention as practicing physicians, is the proper time at which to commence the treatment of congenital club-foot. When we remember that at birth there is only an alteration in the relative position of the parts, without any structural changes in the tissues themselves ; and that these structural changes will inevitably occur if the treatment is long delayed, it becomes our imperative duty to begin treatment at the earliest possible moment. At no subsequent time will as favorable opportunity be offered to speedily and effectually overcome the deformity as immediately after birth.

At this early age tenotomy is probably never required. The foot may be placed in position by gradual and gentle manipulation and can then be retained in its normal position by a piece of adhesive plaster carried around the foot and up the leg on the side opposite to the deformity. This strip of plaster should be long enough to reach above the knee. A narrow roller bandage is now placed around

the foot and up the foot nearly to the knee, when the strip of plaster extending above the knee is to be turned down over the bandage, thus securing the whole dressing. It not unfrequently happens that a dressing of this kind will painlessly and comfortably guide the foot into the proper position in a few weeks. This dressing should be removed daily or every other day, and gentle persuasive manipulation practised. It generally happens, however, that the case does not fall into the hands of the surgeon until some time after birth, and often not until the child is several years of age. In many cases pathological alterations have taken place in the fasciæ, tendons, joints, ligaments, and sometimes in the bones, and the treatment will have to be modified to meet these varying conditions. Again these deformities are developed after birth as the result of infantile paralysis; or they follow diphtheria, or other depressing diseases.

As these cases generally come under the notice of the family physician, he ought always to be ready to combat the tendency to deformity before it is fully developed. When, however, the deformity is established, and the patient is brought to the notice of the surgeon, this treatment will differ widely from that of those cases which do not depend upon paralysis for their production. The successful treatment of talipes depends upon a judicious combination of physiological, mechanical and operative measures, says Mr. Wm. Adams. Each of these principles has its distinctive sphere, and must be employed judiciously and in its proper order. The cure does not depend so much upon the apparatus used, as upon the persistent personal attention of the surgeon. Good results can be obtained by almost any method provided the attendant recognizes a few underlying principles which are present in every case. The physiological treatment is usually considered of but little importance, and is neglected by many. It is my conviction that this method of treatment is of the utmost importance, probably equal in value to operative measures. By physiological methods, I mean the use of those agents which tend to restore the wasted, and inactive muscles to their normal activity, which cause a renewed secretion of synovial fluid, and thus allow the normal functions of the joints to be resumed. Under this classification will be included manipulations, frictions, massage, local gymnastics, electricity, heat and medication. The use of drugs is rarely called for in the treat-

ment of talipes, but the internal or hypodermic administration of strychnia will sometimes assist materially in developing paralyzed muscles. The effect of the drug is said to be enhanced by injecting it into the substance of the atrophied muscles. Frictions, shampooing, and massage are agents of much value in the treatment of club-foot, especially when aided by the application of dry heat. All these agents act in the same manner, viz. : by increasing the circulation of the limb. The temperature of the deformed foot is nearly always lower than the normal one ; the limb is cool to the touch, is passively congested, and is bluish in color. Manipulation is one of the most important methods at our command, and should never be neglected. By its use contracted ligamentous and tendinous structures are lengthened, the joints are exercised and ankylosis prevented, and when the mobility of the articulations has been impaired, passive movements restore the synovial secretion, and the integrity of the joints is regained. Thorough, systematic and gentle manipulations should be frequently, and when possible, daily practiced. No violent or excessive movement should be allowed, lest inflammation be induced.

The use of electricity is also indicated in all cases of talipes, but I do not consider it of equal importance with frictions and manipulations ; in some severe paralytic deformities, a cure cannot be effected without its employment. No case ought to be pronounced hopeless until both the faradic and galvanic currents have been used. The two currents may be used on alternate days with advantage. They should never be employed sufficiently long, nor of sufficient strength to cause fatigue of the muscles ; and the origin and insertion of the paralyzed muscles should be approximated in order to prevent the tension of the sound ones.

Mechanical Treatment.—Previous to 1782 mechanical appliances were employed exclusively for the relief club-foot. In 1803, Searpa invented a shoe for talipes, of much merit, modifications of which are used at the present day. Whilst in many cases a cure may be effected without operative procedures, in every case mechanical measures must be employed. Many of the instruments which are in vogue, even at the present time are complicated, cumbersome, and totally ineffective, requiring the foot to be fitted to the instrument, instead of adapting the apparatus ; and the easier its applica-

tion, the more effective it is likely to be. In my opinion no apparatus is of such ready and universal applicability as that mode of plaster-of-Paris. Of course, like all other agents, it is not adapted to all stages of the treatment, nor to every variety of the deformity, and as I proceed I will endeavor to indicate the conditions to which it is adapted.

I performed my first operation for the relief of talipes in October, 1874, and wishing to employ some immovable apparatus, was lead to use plaster-of-Paris at the suggestion of my friend, Dr. Michael, who had seen it used in Vienna in 1873 or 1874. The result of this case was all that could be desired. From a foot note in Dr. Hutchinson's little orthopedic surgery. I learn that gypsum was first used in the treatment of club-foot by Dieffenbach. Dr. Hutchinson is an ardent advocate of this method of treatment. Dr. Sayre on the contrary is adverse to its employment. It is scarcely necessary to state that the dry plaster may be rubbed into strips of any thin meshed material, preferably gauze or crinoline, and after being moistened may be applied as an ordinary roller bandage. It soon hardens and forms an immovable case, which retains the limb in the exact position in which it is placed. The leg should be first protected by a bandage, as the plaster is irritating to the skin. Dr. Hutchinson employs the plaster in a somewhat different way; takes two pieces of course canton flannel, long enough to extend from the head of the tibia around the heel, to the ball of the great toe, and wide enough to embrace two-thirds of the circumference of the leg. The plaster is put into a bowl and warm water added, until the mixture is of the consistency of cream. One layer of cloth is now placed upon a table, and its upper surface covered with plaster spread smoothly. The other layer is dipped into the liquid plaster, and laid upon the first. Both are now applied to the posterior surface of the limb, around the heel and under the foot, being neatly fitted to the inequalities of the parts. A roller bandage covers and retains this half boot, which soon sets and holds the foot in the desired position. Since 1874 I have used the plaster-of-Paris dressing in nearly all my cases, and always with some benefit. It is the best dressing after tenotomy as it retains the foot immovably in its new position and thus allows the divided tendons to become re-united quickly and firmly. It is the very best dressing in those cases in

which there is contraction or rigidity to be overcome, either before or after operation. It should be reapplied until all contraction is overcome, after which it is no longer indicated. The dressing should be removed daily or every other day, and passive movements, manipulations, and electricity applied. When contraction has been overcome and only some weakness or partial paralysis is left, a rigid apparatus ought not be used; nor should it be employed in any deformity due to paralysis, unless structural changes have occurred in the sound muscles, when it may be used until such changes have been overcome. The weight of the plaster dressing is a disadvantage; but the thickness of the mould need not be great. For infants I have used silicate of soda solution painted on the bandages with some benefit. I have also had satisfactory experience with the foot board, which is so highly recommended by Dr. Sayre. It may be made from a piece of cigar box or shingle, and secured to the foot by adhesive plaster.—*Vide Sayre's Orthopædic Surgery*, p. 97.

Whilst this board and plaster gives very satisfactory results and is much easier to apply than the various modifications of Strohmeier's foot board, I prefer the plaster-of-Paris dressing.

The methods of treatment which I have thus far mentioned, are only applicable to those cases which are due to contraction of the tissues, whilst the deformity still exists; or after tenotomy, where it is necessary to keep the parts absolutely at rest, and in the normal position. No fixed apparatus is suitable for the treatment of deformities due to paralysis; nor to those cases in which the resistance of the tissues has been overcome, when only some muscular weakness and abnormal looseness of the joints still remains. I have generally noticed that relaxation of the external lateral ligaments of the knee was an important factor, in the production of deformity in cases of varus. Even after all abnormality of the feet has been removed, the patient is prone to turn the feet inwards from a rotation at the knee and hip; and in my opinion this rotation is more difficult to correct than the original defect. When the deformity is of a paralytic nature; or after the rigidity of the tissues has been overcome, an apparatus which retains the feet in their normal position, and at the same time allows the natural motions to take place, should be applied. This may be accomplished by means of rubber tubing or a coil of wire. This elastic tension relieves the weak

muscles from all strain, and thus allows them to recover their contractility and to be developed.

Whilst many an excellent apparatus has been devised for the application of this principle, the plan of Mr. Barwell is one of the most satisfactory, as it is easily applied, and may be used in the country, where the most elaborate instruments cannot always be often used : or upon persons who are too poor to procure an expensive article. It is made of adhesive plaster, with narrow slips of tin or zinc, to form a fixed point for the origin of the artificial muscles. At this point is a suitable opportunity of stating that the ordinary resin plaster, or even the India rubber plaster, is not suitable for orthopædic purposes. The mole-skin or swansdown plaster is the best, as it is very adhesive, strong and unirritating. The following is the manner of applying Barwell's dressing :

Cut a triangular fan-shaped piece of adhesive plaster, with slits converging to its apex for its better adaptation to the part. The apex of the plaster is passed through a loop of wire or brass eye, and secured by stiches. This fan-shaped piece is now applied to the foot in such a manner that the eye is over the insertion of the muscle whose action we wish to imitate, and is firmly secured by other pieces of plaster and a well adjusted roller. If desired, we may cover the insertions of several muscles at the same time. For the artificial origin of the muscles, take a thin piece of tin, about $\frac{2}{3}$ the length of the tibia, and $\frac{1}{4}$ the circumference of the leg, with an eye of wire one inch from the top. Two slips of plaster long enough to encircle the limb are now cut, and in the middle of each make two slips just large enough to admit the piece of tin. Now cut another piece of plaster $2\frac{1}{2}$ times as long and a little wider than the tin, and apply it to the leg ; the tin is now placed upon this plaster and fastened by its plaster, and then the vertical piece of plaster is turned up over the tin, a slit being made for the eye to protrude. The roller bandage is now continued up the leg to the top of the tin, when the extra length of plaster is again reversed and secured by a few turns of the bandage. A few links of chain are now secured to the eye in the tin. A hook is now inserted into each end of a piece of rubber tubing $\frac{1}{4}$ inch in diameter, and secured by ligatures. One hook is now fastened into the artificial insertion, and the other into the chain, the links of which allow the

necessary adjustment. This apparatus gives very good results, but has some disadvantages, hence efforts have been made by Sayre, and others to substitute a shoe and brace for it. Sayre's shoe, which is probably the best, is divided in the middle of the sole, having a ball and socket joint, which allows motion in every direction. The rubber muscles, take their point of origin from side braces and are inserted into the shoe. As this instrument is readily removed, does not excoriate, and allows free natural movements it possesses many advantages over Barwell's plan. Dr. A. B. Crosby modified this shoe by simply cutting the sole of an ordinary shoe across and uniting the two portions by two links of chain. I have used this modification with advantage.

A club foot shoe should be constructed in accordance with the pathology of the variety of the disease which we are treating. Equinus and calcaneus are the result of external flexion or extension of the ankle-joint, consequently require a shoe with a stiff sole, but with the braces jointed opposite the ankle; whilst varus and valgus are dependent upon rotation of the medio-tarsal articulation, with generally some flexion or extension of the ankle also, hence a shoe for these affections should be divided in the middle of the sole, in order that inversion and eversion may be accomplished. Some of the paralytic deformities are incurable from having undergone fatty degeneration of the muscles, and though we cannot relieve the condition, we can at least add much to the comfort of the patient by substituting artificial muscles for those that are paralyzed.

I believe calcaneus to be nearly always of paralytic origin. It is a rare affection, however, the only case which has come under my care was due to infantile paralysis, and though incurable, was rendered fairly endurable by a rubber muscle over the gastrocnemius. Sometimes the anterior portion of the foot is elevated by the cicatrization of ulcers, burns and wounds. One such case, resembling calcaneus in many points, has come into my hands, and was cured by an operation.

Operative Treatment.—By this is almost invariably meant subcutaneous division of tendons, fasciæ, and contracted muscles. Osteotomy is sometimes undertaken, but I have had no occasion to perform it. Tenotomy is a great boon to deformed humanity. Section of the tendo-achillis was first performed by Lorenz in 1782,

Michælis, Sartorius, Dupuytren, and Delpech followed ; but all these performed the direct section, through the integument.

Strohmeyer in 1830 first performed subcutaneous tenotomy of the tendo-achillis, and from this time the subcutaneous tenotomy, has been an established principle in surgery.

Whilst capable of accomplishing much good, it must not be indiscriminately performed, and is probably not necessary in the majority of cases. No case requires tenotomy which is dependent upon paralysis, unless such changes have taken place in the muscles of the opposite side from unopposed contraction, which have rendered them incapable of relaxation. When the deformity can be easily overcome by manipulation, tenotomy is rarely required, but when any tissue resists for a considerable time, it will shorten the duration of treatment to divide the restricting structures, even though it might be cured without.

Sayre's rule for tenotomy is as follows : Place the part as nearly as possible in the normal position, then make additional pressure upon the contracted part with the end of the finger ; if at this additional point pressure causes reflex spasm of the muscles or pain, it must be divided, and at the point at which the pressure is made. There is much diversity of opinion in regard to the division of tendons. The English surgeons divide many tendons at once, but American surgeons have gradually abandoned this wholesale division of tendons, and are usually content with section of the tendo-Achillis, and plantar fascia. I have divided the posterior tibial in two cases, and the anterior tibial in one, but I am satisfied than an equally good result would have been obtained by division of the Achillis, and plantar fascia alone. The posterior tibial artery is liable to be wounded when operating upon the posterior tibial tendon, especially in fat children.

Simple talipes equinus, may be cured by division of the tendo-Achillis ; the foot should be brought immediately in position, and immovably fixed with plaster-of-Paris, until the tendon has united, after which the patient may be allowed to walk with the aid of braces, and rubber muscles. The weight of the body will effectually prevent a retraction of the heel.

Calcaneus, though generally paralytic and not requiring tenotomy, sometimes requires division of the anterior tibial, and ext.

long poll. The foot should then be placed in normal position, and dressed with plaster-of-Paris, until the parts have healed, when an apparatus with artificial gastrocnemius must be employed.

Varus may usually be cured by section of the tendo-Achillis and plantar fascia. The English surgeons first divide ant. tibial and post-tibial, and convert it into equinus, and afterwards divide the tendo-Achills. It may be nearly as easily converted into equinus by tension or spring force, as by operation, however.

Valgus, the opposite of varus, is due to action of the peroneals, aided by gastrocnemius and soleus. Often the anterior tibial is paralyzed. All the contracted muscles may be divided and the foot restored to its proper shape.

Splay or flat foot is one of the milder forms of valgus; in this variety the longitudinal and transverse arches of the foot are obliterated, and the whole sole applied to the ground. When acquired it is one of the most painful of all the deformities of the foot, from the sharp edges of the tarsal bones coming in contact with the ground, instead of being supported upon the springy plantar ligaments and tendons. This affection is best remedied by a steel sole arched to correspond with the normal arches of the foot.

Cavus is the opposite of the affection, and consists or a shortening of the antero-posterior arch, thus elevating the instep, and increasing the transverse arch. It is due to contraction of the plantar fascia, ligaments, tendons and sometimes of the integument. It may be relieved by section of any or all of these structures.

Sarsaparilla in Syphilitic Cachexia.—Dr. Wm. Carter records, in the *Practitioner*, May, 1881, page 357, two cases that will tend to rescue sarsaparilla from the neglect into which it has fallen of late years in the treatment of syphilitic cachexia. One man, who appeared on the point of death, after failure of all other remedies, quickly recovered on a pint of sarsaparilla a day. In a seaman, aged 41, the beneficial effects of the same treatment were also much marked.

CURRENT LITERATURE.

DR. ENGELMANN ON MEMBRANOUS DYSMENORRHOEA.

* * * * *

A very interesting discussion in the Obstetrical Gynecological Society, of St. Louis, is reported in the *St. Louis Courier of Medicine*, (June and July) and is well worthy of being extracted entire, but we will give in abstract some of Dr. Engelmann's remarks on the occasion :

A part of the mucosa itself is expelled in the membranous dysmenorrhœa ; it is, however, in some cases, a very thin membrane, the uppermost layer which is composed of remarkably large cells. It varies in thickness, in different cases, from the thickness of a sheet of paper to a line, or even more than a line. I have also found it to vary occasionally in the same case ; it may be thrown off heavily from the fundus, and in a more delicate layer towards the internal os. I think I have some of those specimens yet, as I collected quite a number at the time. There is nothing pathological in the appearance of the membrane ; it is nothing more than a greater or less thickness of the naturally developed mucous membrane, physiologically developed during the engorgement accompanying menstruation, and it is always composed of the upper layer of large cells, and sometimes also of the middle layer, which shows a glandular structure with a good deal of recently formed connective tissue abounding in young cells. So much with regard to the appearance of the membrane. I recall to mind a case which I was called to see during a visit East, just after I had made these examinations. It was a most uncommon case. The lady was the wife of a physician, and both he and she were in vigorous health and well developed. From the time of the first appearance of the menstrual flow, this lady had been afflicted with membranous dysmenorrhœa, but the disease was not accompanied by the distressing symptoms which usually characterize it ; she had no pain whatsoever. She passed then membranous casts from the surface of the uterus with the utmost regularity at each period, but without the slightest sensation of pain ; marriage caused no change, but she remained sterile, I do not remember how many years, I believe it was six, that she

had been married, and both she and her husband were anxious for offspring. I saw this lady in consultation with a friend after having examined a number of the casts; the womb was normal in size, I may say slightly enlarged, more like the organ of a multipara; the position was good, and the openings were wide; but at each menstrual period, before and after marriage, these casts were passed without the slightest pain at the time, and even without any menstrual suffering. All treatment possible had been attempted. I do not remember precisely what I advised at the time, but certainly an energetic and continued treatment, scarifications before the appearance of the flow and the use of the galvanic stem pessary, and the continued current during the intermenstrual period. I think he also gave large doses of alkali at the same time; at all events, after the treatment had been continued energetically for, I think, some four or five months, she conceived, and a healthy child was born. A few weeks ago I received a letter in which the birth of the second child was announced. The casts had diminished after the birth of the first child, more I cannot say, as I have not been advised of the details of the case since. I think this case is one of interest, because the casts were passed without suffering, while usually the severest pain accompanies the expulsion of even the slightest portion of membrane, as in the instance related by Dr. Barret, where a small piece of membrane, the size of a pea, seems to have given rise to excessive suffering. I have seen a few of those cases; and I must say that I should not know what line of treatment to advocate, because in some instances the treatment may give relief, and in others it will fail. As a rule we may say that the condition is accompanied with sterility and always with pain; this one case which I was fortunate enough to see is a most unusual exception.

Dr. Boisligniere.—Will you explain how this villous appearance, this shaggy appearance of the membrane is produced? Are those extraordinary waves the plastic casts of the utricular glands?

Dr. Engelmann.—I am very glad that you have mentioned this point, because although a very simple matter, it is not generally understood. You will find precisely the same shaggy appearance of the outer surface of the triangular mass in a decidua which is expelled in membranous dysmenorrhœa or in early miscarriage, and it could not well be otherwise. It is the torn surface where the

thickened mucous membrane is severed ; it is torn apart in the middle or granular layer, consisting of a meshwork of tougher tissue filled in with more delicate material ; this does not tear smoothly, but leaves a rough surface, and it is this which we always notice as giving that peculiar appearance to the expelled portions of the membranes. It is the surface of the cast towards the muscular layer which gives character to the whole, as it is that which always appears. The inner surface of the cast will always be found perfectly smooth, as it is the natural surface of the uterine mucosa.

TURPENTINE IN DIPHTHERIA.

Dr. Bosse *Berlin Klin. Wochenschrift*, 1881, No. 9) illustrates this method by several cases. Of the pure oil of turpentine, an adult requires one large spoonful a day ; children from six to twelve years, two-thirds of the same ; children from one to two years, half of a large spoonful. The tolerance of this medicine is greater than might be expected. Out of eleven cases, only four vomited ; if rejected, the dose must be repeated after some hours. Generally, alvine evacuations follow, which possess a penetrating odor of turpentine. After these, the general symptoms, such as fever and headache cease. There is a rapid recovery ; patients, who on the previous day took a spoonful of oil, already recovering the day after, or two days at the most, at least as regards the clearing of the throat, and the disappearance of the exudation. They would die only when assistance was rendered too late ; i. e., on the sixth or eighth day. Dr. Bosse attributes this effect of the oil of turpentine to its containing ozone. He denies that it has a caustic effect in swallowing, and mentions Naunyn's example, who (1868) in order to try the physiological effect of this remedy, took in company with his three assistant-surgeons, 300 grammes of turpentine at one dose, 100 grammes thus coming to the share of each, no pain, except a slight headache was experienced by these experimenters ; neither albuminuria nor strangury followed.

UNNECESSARY OPERATIONS IN THE TREATMENT OF DISEASES OF WOMEN.

Dr. Clifton E. Wing, of Boston, has written a pamphlet with the above title, which gives the key-note of the reactionary current which is setting in against a large number of the surgical operations, now, and formerly, in vogue, for the cure of some of the diseases of women.

Dr. Wing has taken the following not unusual gynecological procedures, to illustrate his position :

(1.) The Operation for Ruptured Perinæum. (2.) Division of the Neck of the Womb. (3.) The Operation for Restoring the Neck of the Womb where this has been torn (Emmett's operation). (4.) Curetting of the Uterine Cavity. (5.) The Operation upon the Anterior Vaginal Wall for Prolapse of this Portion and Cystocele.

The following extract on the operation for ruptured perinæum, is given in his own words :

I cannot but think that the evils attributed to slight lacerations have been greatly exaggerated. It is the exception, and not the rule, to find in women who have borne children a perinæum perfectly intact, and it is a mistake to take as a fixed standard of what every perinæum should be, that condition found in nullipara and virgins. Not only are the parts more relaxed and patulous as the result of the distension in child-bearing, but, as Matthews Duncan has pointed out, there is invariably more or less rupture of the vaginal outlet, during parturition, even if the perinæum proper is not torn, and if the condition found in those who have not borne children is assumed to be the proper condition for all women, then an operation may easily be found "necessary" in practically every woman who has had children.

I am free to state that I have not found that patient's with slight perineal laceration (and many have come under my notice) have suffered from this condition the direful symptoms which have been ascribed as accompanying such lesions. It has been truly said that the sole justification of any operation must be the strong probability that compensating good will be the result. Under such a rule of action I believe that the cases of slight perineal lacerations

requiring or justifying surgical interference will be few. One writer, after calling attention to the fact that marked lacerations suffered years before sometimes remain absolutely without injurious results, pointedly remarks of women having slight lacerations, "It is significant that they suffer more after their attention has been drawn to the injury." This is a hint enthusiastic operators will do well to consider !

Neither in all cases where the *perinæum is more extensively ruptured* is the operation always advisable. A great American gynecologist has put forth the following as aphorisms : " Given a woman with a perfect perinæum, and the relation of the parts within the pelvis will be perfect : destroy that perinæum and at once the parts will fall out of position ; restore the perinæum, and as soon as it is perfect all the pelvic organs will be restored to their normal relations." It is difficult to conceive of teachings better calculated to mislead. The idea that a woman with a perfect perinæum cannot suffer from flexion, version, or prolapsus of the womb, and displacements of the other contents of the pelvis is nonsense, as every physician knows, and that when there is a rupture of the perinæum and at the same time displacement of the parts within the pelvis, the simple repairing of the perinæum is always to insure the restoration to their normal relations of all the pelvic contents is equally absurd.

* * * * *

" The mistaken notion so common among physicians that where a lever pessary is to be worn a firm solid perinæum is necessary for it to rest upon, has doubtless often led to the performance of perineal operations which might have been avoided had the surgeon been an expert in the adjusting of pessaries, and known the fact that well-fitted ones do not rest upon or even touch the perinæum or perineal body.

" *Lacerations involving the sphincter muscle and the rectum*, of course, always demand operative measures."

* * * * *

Of Diseases of the Neck of the Womb, " it is questionable if any other operation of modern surgery has been quite as thoroughly overdone and abused as this has been." The operation fortunately is falling somewhat into disuse. " It seemed" formerly " as though

the gynæcologist divided the cervix uteri simply because they did not know what else to do." Surely, from our present knowledge of the subject, not only was the operation highly overrated, but the importance of the uterine conditions,—stenosis, crooked canal, stricture, &c., greatly exaggerated.

The Operation for Restoring Lacerated Cervix-Uteri, (Emmett's Operation) has also been greatly abused. But we cannot agree with Dr. Wing about the extent of this abuse, if we take this State as a criterion, (which, perhaps, it is not.) We believe that none of the long list of operative procedures on the womb have given so much relief to patients as Emmett's Operation. Those writers who believe that pregnancy cannot take place, or that a woman cannot go to full term when there is an extensive laceration, need to study the subject anew at the bed-side. It has not been many months since we saw a woman come to full term with a laceration up to the utero-vaginal junction; and a few years ago we were shown a case in the practice of Dr. Love, of Wilmington, in which the laceration was so extensive that the membranes could be distinctly seen, bulging out of the vulva, and this at about the eighth month of pregnancy, the patient going to full term.

"The cases which are accompanied by troublesome symptoms and demand attention are the exception rather than the rule. If surgical interference is confined to such, Emmett's operation will be productive of much good. As at present often done, not because it is really needed but because a chance for its performance offers, it probably in the aggregate does more harm than good.

"The operation is by no means devoid of danger. Phlebitis, cellulitis, pelvic abscesses, septicæmia, peritonitis, etc., have followed its performance by the best operators, and left results from which the patients would recover only after months of suffering, if at all. It is only a short time ago that a discussion in one of our local societies brought out accounts of several deaths after this operation. I myself have known of more than one such result."

Curetting the Vagina.—"This is an operation which is being frequently performed at present. It consists in scraping, with instruments devised for the purpose, the inside of the womb (much as gardeners at certain seasons scrape trees) the object being the removal of morbid growths and excrescences, and the consequent

checking of uterine hæmorrhage, etc. Formerly by the term 'curetting' was meant a pretty serious operation, one which was comparatively rarely done, it being, as a rule, resorted to only when simpler means of controlling uterine flowing had failed, and when, in the absence of other apparent cause of hæmorrhage, there was a strong probability that intra-uterine fungosities of intractable nature, were present. To insure the removal of such growths the 'curette' or instrument employed had a comparatively sharp (although not necessarily a 'cutting') edge. With the increasing interest in the subject of diseases of women, such as has developed of late years, and the accompanying enthusiasm for 'operations,' naturally there has come an increased number of cases of curetting, until nowadays, if a patient presents herself with a simple uterine catarrh, and a history of increased uterine flow (which is but natural in such cases), and particularly if she has borne children, and has in consequence an 'invitingly-open' uterine canal, perhaps the first thing the physician thinks about is the curette. But under this kind of practice the results with the old instruments were unsatisfactory. Too many patients were seriously injured, and some were killed, by the procedure, for even in the best hands, 'curetting,' if thoroughly done, is a dangerous process for the patient to go through, and an operation which should always be kept as a last resort. The result was the introduction of a less formidable instrument in the shape of the 'dull curette.'

"Now in most cases of common uterine catarrh the lining of the womb is more or less inflamed and swollen, and, from the presence of increased secretion, soaked and softened. The use of even a dull curette, under such circumstances, will, almost always, result in the removal of more or less of the softened lining, with, perhaps, a few distended and swollen glands; but in such cases the proceeding is not at all necessary, for, the catarrh checked by proper means, the parts will soon return to a normal condition. I have several times seen the dull curette used under such circumstances, and what were termed 'characteristic granulations' removed and exhibited with satisfaction by the operator to those present, when I have afterwards taken some of these 'granulations' and 'teased them out' under water and seen them resolve themselves into strips of apparently normal uterine membrane, which had evidently been rolled up into

little balls before the edge of the curette, as snow is rolled into balls by children thus deceiving the operator.

“ Dr. Engelmann, of St. Louis, has recently published an article entitled ‘ The Dangers Incident to the Simplest Uterine Manipulations and Operations,’ in which he has collected many bad results following the common gynæcological procedures and operations. Naturally in recording the bad results, he was confined, in great measure, to the reported cases. Could he have known of the cases not reported his examples would have been multiplied manifold. I regard the paper as a most valuable one at the present time, and as possible evidence of a coming reaction from the ‘ operation fever’ which has afflicted gynæcological operations too lightly. If we can go a step further, and lead physicians to realize that the operations now so much in vogue can often be avoided, it will be another step in the right direction.”

This reaction against uterine surgery deserves careful study. It is a reaction upon the specialist of his own teaching, a reaction in which he suffers most severely.

The apprehension now is, but we should drift back to the teachings of Charles West and Tilt.

THE NORTH CAROLINA BOARD OF HEALTH ON ADULTERATIONS OF FOOD-SUBSTANCES AND MEDICINES.

The following circular was recently issued by the North Carolina Board of Health :

TO HOUSEHOLDERS AND OTHER PERSONS INTERESTED IN THE PREVENTION OF THE ADULTERATION OF FOOD-SUBSTANCES AND MEDICINES :

The North Carolina Board recognizing the wide-spread interest of the public in the rumored frequent adulteration of food-substances and drugs, desires to give every facility to detect adulterations or quiet unfounded suspicions. While the Board does not share in the frequent public statement of the harmful adulteration

and cheats in the food we eat, the liquids we drink and the medicines we give, it was deemed advisable to offer as many as desired it, up to the full capacity of the laboratory, analyses of suspected articles.

The list of articles given below need not be the limit of the enquiry, but may serve to direct attention to the class of articles :

FOOD-SUBSTANCES.

Soda, Saleratus, Baking Powder, Cream of Tartar, Sugar, Milk, Butter, Liquors, Flour, &c., &c.

DRUGS.

Paregoric, Laudanum, Quinine, Opium, and such articles as are usually sold for domestic use.

Upon application to the Superintendent of Health of your county, you can procure the necessary information.

THOMAS F. WOOD, Secretary.

We believe no other Board is enabled to offer to citizens suspecting impurities and cheats in food and medicines the privilege of free analyses. It is the intention of the Board to pursue the subject patiently, and upon these investigations to determine whether they will advise the State to enact laws upon the subject.

PHYSOSTIGMA AS AN ANTIDOTE TO BELLADONNA.

Mr. James Hudson, in the *British Medical Journal*, June, 1881, page 918, reports a case of belladonna-poisoning successfully treated by physostigma, injected subcutaneously. Eight hours after the poison was taken the patient was perfectly unconscious, notwithstanding active treatment. In five minutes after the injection he looked round in a surprised manner, and, in five minutes more, was quite himself again.

EXPERIMENTS WITH DISINFECTANTS.

The National Board of Health Bulletin, July 23, gives some experiments by Dr. Geo. M. Sternberg, U. S. A. The general results of experiments performed previously is stated. These experiments were instituted to test the comparative value of certain *commonly-used volatile and gaseous disinfectants*, and vaccine virus was the substance exposed to their action. A positive result after vaccination with non-disinfected virus, and a negative result from that exposed to the disinfecting agent was taken as proof of the potency of this agent.

The conclusion reached is that these three agents, chlorine, nitrous acid, (nitrogen dioxide), and sulphurous acid (sulphur dioxide) are reliable disinfectants in the proportion of 1 volume to 100 of air. It is probable that a considerably smaller proportion of the above disinfectants would be efficient in destroying the potency of thin layers of virus in a moist state, or of virus exposed to the action of the disinfectant in an atmosphere saturated with moisture. It was my intention to determine the minimum quantity of each of these agents which could be relied upon to destroy the potency of vaccine virus, both in a dry and in a moist atmosphere, but the difficulty of obtaining unvaccinated persons upon whom to make the trial has prevented me from making further experiments in this direction up to the present time.

Carbolic Acid.—The following remarks, show the results reached in my experiments with this agent :

The amount of pure acid required to destroy the vitality of bacteria is equal to about 17 pounds in a room 12 feet square and 12 feet high (capacity 1,728 cubic feet), and to fulfill the conditions of the experiment in disinfecting on a large scale, it would be necessary to scatter this amount over the floor of a room having these dimensions, and to suspend articles to be disinfected near the floor for at least six hours, care being taken that all apertures were closed so that the fumes of the acid might not escape. Four times this amount (68 pounds) of "crude" acid placed upon the floor of a room of the same dimensions would not destroy the vitality of bacteria exposed in the room for six hours. In amount of the impure acid equal to 46 fluid ounces volatilized in the same room will

not destroy the potency of vaccine virus in a moist state (rubbed up with glycerine) when the time of exposure is twelve hours. Finally these experiments show that the popular idea, shared, perhaps, by some physicians, that an odor of carbolic acid in the sick room, or in a foul privy, is evidence that the place is disinfected, is entirely fallacious, and, in fact, that the use of this agent as a volatile disinfectant is impracticable, because of the expense of the pure acid and the enormous quantity required to produce the desired result.

Dr. Sternberg selected as his inoculating fluid, blood and serum from subcutaneous connective tissue of rabbits recently dead, injecting this beneath the skin of a healthy rabbit. As this fluid produces death in from 24 to 48 hours, a negative result after treatment with a disinfectant he considered proof of its power to destroy the injected material. The candor with which the experimenter points out his probable errors, attaches increased interest to his summary.

He gives a table with three groups of disinfectants. *Group 1* gives those substances efficient as disinfectants in the proportion of 0.5 per cent. *Group 2.* Those substances which failed with 0.5 per cent. but were efficient in proportions below 2 per cent. *Group 3.* Substances which failed in proportion of 2 per cent.

In the first group we find, chromic acid, ferric sulphate, cupric sulphate, thymol, caustic soda, nitric acid, sulphuric acid, ferric sesquichloride, sodium hyposulphite, hydrochloric acid.

In the second group, carbolic acid, salicylic acid, zinc chloride, caustic potash, iron-alum, zinc sulphate, potassium sulphide, tannic acid, boracic acid, potassium permanganate, sodium bichlorate.

In the third group, potassium nitrate, potassium chlorate, sodium chloride, alum; lead acetate, magnesia sulphate, glycerine, alcohol, pyrogallie acid.

A ten per cent solution oil of *Eucalyptus globulus* (eucalyptol) failed to disinfect the injection although the rabbit lived eight days; the post mortem examination showed that he did not die of septicæmia. Dr. Sternberg does not consider it fairly a failure to disinfect, and further experiments will be required to determine the value of this agent, which is especially interesting just now from the fact that Lister is using it in his antiseptic dressings to wounds.

AN EXPERIMENTAL INQUIRY INTO HUMAN MILK, AND THE EFFECTS OF DRUGS DURING LACTATION ON EITHER NURSE OR NURSING.

Mr. Thomas M. Dolan and Mr. W. H. Wood commence at page 85 of the *Practitioner*, for 1881, a series of interesting papers on the above subject, undertaken by Mr. Dolan in order to answer the frequent question: 'Will my medicine have any effect upon the child?' That medicines and foods do affect the milk, and consequently the child, is certain. Frequently, as Mr. Dolan shows, a wet-nurse on her first arrival, causes the child to thrive; but soon all becomes changed, because, from a laborious out-door life, with few luxuries, the woman is surrounded with good living, and has very little exercise, and consequently her milk ceases to nourish the child. Cause her to resume, as near as possible, her former mode of life and food, then her nursing quickly recovers. A clear description of the best method to analyze human milk is then given, which is, however, too long for insertion, and cannot be condensed. The practical outcome of these elaborate papers is summed up at page 327. 1. All therapeutical agents intended to act on the mammary gland must first enter the blood. 2. All drugs derived from the natural orders, liliaceæ, cruciferæ, solanaceæ, umbelliferæ, etc., enter the blood and impregnate the milk; hence caution is needed in giving such drugs to nursing women. 3. The only approach to a true galactagogue is jaborandi. 4. Belladonna is an antigalactagogue. 5. In inaction of the mammæ, the milk may be increased and influenced by medicines. 6. The milk of the mother may be increased in heat-forming elements by the administration of fats. 7. The salts of milk may be improved by the administration of medicines. 8. Various physiological actions—purgative, alterative, diuretic, etc., may be produced in the child by administering drugs to the mother. 9. If we are to expect any improvement in milk-secreting power, both as to quantity and to quality, we must look to diet for the attainment of that object.—RICHARD NEALE, M. D., in *London Medical Record*.

SIMPLE TESTS OF WATER.

The complete analysis of water requires much chemical skill, but the more common impurities may be detected by simple tests and various injurious salts thus recognized. "Among them," says the *Boston Journal of Chemistry*, "are the nitrates, whose presence is chiefly significant as showing that organic matter has been acted upon, and may be present. The danger is not in the salts themselves, but in their source, which should, if possible, be ascertained. To examine water for nitrates put a small quantity of it in a test tube, add an equal quantity of pure sulphuric acid, using care that the fluids shall not mix; to this add carefully a few drops of a saturated solution of sulphate of iron. The stratum where the two fluids meet will, if nitric acid be present, show a purple, afterward a brown color. If the nitric acid be in minute quantities, a reddish color will result. The presence of ammonia, if in excess, can be determined by treating the water with a small quantity of potassic hydrate. Ammonia, if present, will be liberated, and may be recognized by its odor, or by the white fumes of chloride of ammonium, when a glass rod wet with muriatic acid is passed over the mouth of the test tube. If chlorine is present in any form in water used for drinking, it is evidence that sewage contamination in some form exists. The presence and amount of chlorine may be ascertained by the following simple method: Take 9 grains of nitrate of silver, chemically pure, and dissolve it in 200 units, (say cubic centimetres), of distilled water. One unit of the solution will represent 1-100th of a grain of chlorine. Take a small measured quantity of water to be examined, and put it into a glass vessel more than large enough to hold it. Add to the water a small quantity of the solution; if chlorine be present, a white precipitate will result. Repeat the addition, after short intervals, until no precipitate results. The units of the solution used will determine the hundredth of a grain of chlorine present. If more than a grain of chlorine in a gallon be present, reject the water, unless it can be clearly determined that the excess does not come from sewage. The water should be slightly acidulated with nitric acid before the test is applied.

Heisch's sugar test for the presence of dangerous organic matter

is at once simple and trustworthy. Place a quantity of the water to be examined in a clean glass stoppered bottle; add a few grains of pure sugar, and expose to the light in a window of a warm room. If the water becomes turbid even after exposure for a week, reject; if it remains clear it is safe.—*Lancet and Clinic*.

OXIDIZED OIL OF TURPENTINE.

Mr. T. C. Kingzett, in the London *Lancet*, June, 1881, brings forward the oil of turpentine, through which the air has been passed for a prolonged period, as a valuable antiseptic agent, being at the same time much cheaper than oil of eucalyptus and more intensely antiseptic than this drug, besides being free from all the objections that attend the use of this agent. Mr. Lister is making a trial of the oxidized oil of turpentine, the result of which the profession will await with interest.—*London Medical Record*, July 15th, 1881.

The oil of turpentine has been known to possess antiseptic principles for many years. The turpentine distilleries along the Cape Fear river at Wilmington, have borne an important share in lessening the virulence of malaria. It was during the war, when all these distilleries were stopped, that the yellow fever scourged the town.

The knowledge of the action of the vapors given off by the turpentine stills in purifying the atmosphere, has been attributed to their ozonizing power, for it is well known that the ozone test papers are deeply stained when placed within the reach of these vapors.

Oil of turpentine is used very commonly as a dressing for wounds of all sorts, and it is credited with having local anæsthetic properties. The oil or "spirits" of turpentine after it has been exposed to the air, precipitates a small portion of gum, and is not esteemed so curative in its action in domestic practice, as that fresh from the still.

We have no doubt that in those countries where oil of turpentine is scarcer than in North Carolina, it will rapidly rise in the esteem of the medical man. The old adage goes: "*A beau mentir qu'il vient de loin.*"

NOTES.

What can be more outrageous than Puck's new application of the old saw ; "Where ignorance is Bliss it is folly to be Weisse."

The Fifth Annual Meeting of the American Dermatological Association will be held in Newport, R. I., on August 30th and 31st, and September 1st., Arthur Van Harlingen, M. D., Secretary.

The publishers of the *Atlanta Medical and Surgical Journal* announce a change in the editorial management after the September number. The editorial staff succeeding the present editor, is Dr. Jas. B. Baird, and Dr. John Thad. Dickson.

The Arkansaw Doctor is the name of a new exchange, and a new candidate for a support of the profession in Arkansas. We have received the two numbers issued, and if the editor succeeds in improving to the twelfth number, as he has so far, he will not be behind his older brothers. We welcome our new friend to the honors and pecuniary rewards of medical journalism.

The Sample Copy Man Again.—"From Dr. Frank L., Patterson Creek P. O., Whitley Co., Ky. All medicines warranted genuine ! Satisfaction guaranteed ! The string of my door latch hangs on the outside ! Call and see me, but Holy Moses ! don't ask for credit."

Gentlemen :—Please oblige me by sending a sample copy of your JOURNAL, also rates of advertisement.

Respectfully,

FRANK L., M. D.

The Climax of the Antiseptic System.—At a recent duel, says the *Lyon Médical*, the adversaries were about to cross swords, when a voice called upon them to stop. It was that of the surgeon in attendance, who, imbued with modern ideas, taking from his pocket a bottle of carbolic acid carefully wetted the points of the weapons. He then exclaimed, with the air of a man who has done his duty, "Proceed now, gentlemen ; you may kill each other, but at all events you are safe from purulent infection."—*Philadelphia Medical Times*.

In our June number we were guilty of the error of associating two of the cleverest manufacturers in this or any other country, with each other. But it is well known that the Trommer's Extract of Malt Co., are the sole proprietors, and only manufacturers who devote themselves exclusively to the manufacture of Malt Extract, in this country ; and also it is now well-known in the South that the manufacture of Quinquina by Messrs. Chas. T. White & Co., has added a very important anti-periodic remedy to our list, one that is monthly growing in favor with us. We wish them both the success they so eminently deserve.

Transplantation of Bone.—In the *Glasgow Medical Journal* for May, Mr. Macewen reported the case of a boy on whom he had operated for necrosis of the humerus. The whole shaft had died, and after separating the epiphysis, the bone was removed subperiosteally. New bone was produced at both the upper and the lower portion, but there was a gap remaining where no bone had been reproduced. The limb was useless. He proceeded first to make a groove in the soft parts in the position of the bone, and then placed in this groove small fragments of wedges of bone removed from other patients for curved tibiæ. The grafts were thus taken from six wedges of bone removed from six limbs of patients, and were reduced to very small fragments previously to insertion. Proper care was taken throughout to have the parts perfectly aseptic. The shaft has been completely restored, and the humerus measured only one half inch less than the other in length.—*N. Y. Med. Journal and Obstetrical Review.*

THE NORTH CAROLINA MEDICAL JOURNAL offers as a premium for the best prepared and complete herbarium of the medicinal plants of the State, the following works, or their equivalent, in volumes the successful competitor may choose :

Curtis' "*Woody Plants*" and "*Catalogue of Indigenous Plants*" in one volume.

"*Fluckiger and Hanbury's Pharmacographia*," one volume ; and "*Flora Americæ Septentrionalis ; or a Systematic Arrangement and Description of the Plants of North America.*" By Frederick Pursh, two volumes.

The collection must be prepared by the person presenting it. Each specimen must be neatly mounted on stout white paper 9x14 inches, (two or three specimens can be put on a sheet when they are small) and the name marked on each. This offer is made to members of the State Medical Society, and to licentiates of the Board of Examiners who may not be members.

Herbaria must be sent in on the 2d Tuesday in May, 1882, at the Concord meeting. For further particulars address Editor of the JOURNAL.

The Sanitarian is now in its 9th volume. It has done, and continues to do valuable service in Sanitary Science. The August number contains, "Sanitary Suggestions for Jeanette Search Expedition," by Surgeon-General Wales, Systematic Study of Causes of Sickness and Death," by Dr. H. B. Baker, "Yellow Fever Recognition and Isolation," by Dr. R. B. S. Hargis; "Progress of Sanitary Protection at Newport, R. I.," by Dr. H. R. Storer; "Advice to Mothers on the Care of Infants"; and an attractive collection of editorial notes. We recommend the many physicians who recently have shown such interest in sanitary progress here, to subscribe to this Journal. Address, A. N. Bell, M. D., 113 Fulton Street, New York.

OBITUARY.

EDWARD FLEET SMALLWOOD, M. D.

Dr. Edward Fleet Smallwood died at his home in Newberne at 12 o'clock M., July 11th, of typhoid fever, in the 59th year of his age.

For a number of years Dr. Smallwood had suffered from stomach trouble, which often rendered him very uncomfortable and despondent, but which did not for any long interval of time interrupt his professional duties until the past March when he was confined to his room for some weeks. During his convalescence from this confinement, which was tedious and unsatisfactory, he was worried with some troublesome and engrossing cases among his patients which seemed to add in no small degree to the weight of the burden he was

carrying, and on the night of July 2d, he took his bed with the premonition that his impending attack was to be his last. His symptoms developed with unusual severity and continued without abatement until the night of his death when he passed away quietly and without a struggle.

Dr. Smallwood was born in Newberne, September 25th, 1822. His educational training was begun at Newberne Academy from which school he entered the University of North Carolina, where he passed the first and second years of his collegiate course. His health failing, he left the University and completed his literary studies at Dr. Muhlenberg's College, Flushing, Long Island.

His studies in medicine were prosecuted under the guidance of Drs. A. C. Post and P. A. Aylett, of New York. Of Dr. Aylett, that grand old apostle of medicine whom so many physicians have learned to revere, was the trusted and constant companion, reading for him, day by day, a service that any of the old man's students would have been proud to perform.

He graduated from the University Medical College, New York, in 1846, and was, therefore, offered the place of Demonstrator of Anatomy in that institution. He declined the offer and the place was filled by Dr. Lewis A. Sayre.

After his graduation he commenced the practice of his profession in Newberne, N. C., where he continued—with the exception of a temporary absence during the war—to practice until the beginning of his last illness.

Dr. Smallwood was a man of fine attainments, literary and professional, and a modest man who shrank from display of every kind. Rarely has it been the fortune of a physician to possess the love and esteem of his clients as he did, and difficult, indeed, in their estimation will it be to fill the void he has left.

In his dealings with his brother practitioners he was ever careful of their rights and generous to a fault where "self the wavering balance shakes."

In his family as husband and father and host, his life and manner were truly sublime, untiring in his devotion and unselfish in his regard for the happiness and comfort of his wife and children, he was the light and life of his household where his memory will long live as a solace and comfort for those who so deeply mourn him.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 3. Wilmington, September, 1881. Vol. 8.

ORIGINAL COMMUNICATIONS.

CLINICAL LECTURE ON SURGERY.

By R. A. KINLOCH, M. D., Professor of Surgery, Medical College,
State of South Carolina. October 29th, 1880.

Reported by THEODORE N. DUBOSE, Medical Student.

INJURY OF ELBOW JOINT CONTINUED—ULCERATION OF LEG— LUPUS OF FACE.

I bring before you this morning, gentlemen, the woman I operated upon at my last clinic, and for the benefit of some of you I will repeat part of her history. She came to this hospital about six or eight weeks after she had received the injury, it was too late to ascertain the precise nature of the injury, but there was fracture and perhaps luxation. I feel this deposit of callus. My object was to put the arm in a flexed position, so that it would be more useful to the individual—you saw me do this the other day. I now take off the bandage for the first time, and though there is some swelling still, it is much better than I expected to find it. She has considerable use of the joint, and I can flex the arm—pronation and supination are not lost. She does not suffer much from pressure

upon the parts. I pointed out to you the other day the injury. The coronoid process has been fractured, perhaps, inner condyle of humerus. Every two or three days, the arm must be taken from the sling and exercised at the joint. This shall be the treatment. As I have two other patients to bring before the class we will let the woman go. I propose operating upon one, the other I show you for contrast. The first is a case of ulceration in the leg of a young man—it is rather uncommon in the young and robust much more common in the laboring classes of men—those whose occupation is such as to make them stand all the time.

This man is by occupation a barkeeper, and has to be always upon his feet. Now, upon noticing the well limb, we see the veins unusually blue and prominent indicating passive congestion or fulness of the small veins; in time these will become varicose, and a mere scratch may produce ulcerations of integument on account of the weakened condition of the tissue. Again, as in this case, small ulcers may be developed, and through neglect these may coalesce, as you see here, extending through the skin into the deeper tissue. You must notice the uniform smoothness of the integument about the ulcer—no hard red points and the integument is distended on account of plastic infiltration, it is also very thick. See the edges of the ulcer are elevated and hard, and I notice granulation, but the sore does not look healthy, in fact it has the appearance of a chronic sore. He has been suffering with this sore for six months. In regard to the treatment, *put him in bed and keep him there*, this is more important for a time than any local application, and if we were to treat this case in this manner, in three or four weeks you would notice a vast improvement. We generally assist the venous circulation and support the limb with a bandage. It must extend from the foot to the knee, and it is best while patient is in bed to employ a “many-tailed bandage.” You wet the strips in water or some antiseptic solution (sodium chloride, $\frac{3}{4}$ ij, to one quart of water) to prevent septic changes. The advantage of this bandage is that you can open it in part many times a day without disturbing the limb. You pay attention to the general health of individual, attend to his bowels, and if constipated, give him cathartics.

I now bring before you the third patient who is suffering from chronic ulceration of a rather peculiar type—she ought to have been

well before. She was in the hospital last year, and as she left before she was entirely well, and did not take the proper care of herself—she has returned in this condition. She improved so much under my treatment last winter, as not to be recognized by one of the physicians who formerly had charge of her. You see an ulcerated condition of the skin affecting the nose, upper lip and part of the face. The ulceration extends almost to the eye on the right side, and I am sorry to notice an ulcer on the left eyelid. The skin is very thick and presents nodules here and there, and you can see the peculiar degeneration of the tissue. The woman has not been doing any work, and she has no sores on any other part of her person. The disease being confined to this region (face). It was supposed when she first came here, that she was suffering from secondary or tertiary syphilis, but this idea is discarded as we know tertiary syphilis does not confine itself to one particular region. This is not an ulceration like I showed you on a man who suffered from tertiary syphilis. His cicatrices were white, very different from these. This woman has a cutaneous disease—*lupus*, a peculiar affection involving the skin. These little nodules resemble granulations. The disease extends symmetrically on both sides of the nose. *Lupus* generally does, and for this reason some surgeons likening its shape to a butterfly, the body being on the nose and the wings on each side. *Lupus* is divided into several kinds: (1) *Lupus vulgaris*, this is subdivided into (a) *lupus exedens*, and (b) *lupus non exedens*. In *lupus non exedens* we have no ulceration, no destruction of tissue—generally affects only the skin—while in *lupus exedens* the tissues become soft, break up and ulcerate and is more severe leaving cicatrices. (2) *Erythematous*: this is confined only to the superficial portion of the skin, sometimes connects itself with the sebaceous follicles, does not produce so much cicatricial tissue, and resembles erythema very closely. Both kinds may become chronic, but the disease is not *malignant*, it can't be inoculated, and is not contagious. We do not know how it originates, but only know it by its clinical history. *Lupus* was formerly considered incurable, but we do not regard it so now. *Lupus vulgaris* usually attacks young women, while the erythematous is more general.

Treatment for *lupus* as well as for all morbid growths consists in

eradicating all diseased tissue either by the knife or caustic. In the early stages of the disease, before it becomes fixed, green soap rubbed upon the tissue is very good, or, take nitrate of silver and bring the caustic to bear upon all of the diseased surface, or apply caustic potash, thereby producing a substitutive inflammation.

In operating upon this patient last winter, I made use of this instrument which you see in my hand. It consists of a piece of "watch spring" sharpened and bent at one end, the other end being fixed in a handle. I will now attack the tissue and scrape away all superficial parts until I get a deep raw surface—after treatment. For the first day or two, keep the parts moist with a weak carbolic solution and then we will cover the surface with the following ointment: Salicylic acid, 3 v., glycerine, 3 iiss. She improved under this treatment last winter. Then keep up general condition of the patient. Give her, if necessary, in turn, cod liver oil, iron, arsenic and iodide of potassium. Donovan's solution was given her when she first came under my charge, and it agreed with her so well that I propose to use it again. Part of the swelling of the lip is due to irritation produced by the constant discharge from the nose. You notice the patient does not complain of pain or itching and here it differs from common inflammation. I find the tissue breaks up readily, and I won't trouble the parts that appear to be cicatrized. I will have to repeat this scraping some other time, I can't do more to-day. We have active hæmorrhage at first, but this soon ceases. The patient will be in the wards for some time and you can notice her there.

AINIUM.

Delivered before the North Carolina Medical Society at Asheville,
June 2d, 1881.

By E. H. HORNADAY, M. D., Willow Green, N. C.

At the last meeting of this Society which convened in the city of Wilmington, N. C., May 18th, 1880, Dr. N. J. Pittman, of Tarborough, N. C., reported a case of *ainhum* (which is a disease of the

little toe, and is peculiar to the negro and his descendants) that had just before come under his treatment. He stated that no such case had come under his observation and treatment before in a practice of nearly forty-two years. He had with him a pathological specimen which he exhibited to the Society. I for one of the members of this Society was, up to that time utterly ignorant of the disease, never having before seen, read, or heard of it.

On arriving home I went to work in order to post myself in regard to the pathology of *ainhum*, but made a signal failure as my library contained no literature on the subject.

I reached my home from Wilmington on Friday, May 21st, and on Sunday morning, May 23d, a negro man called at my office to consult me in regard to a trouble with the little toe of his daughter about ten years of age. He said that about eight months before they noticed a constriction of the left little toe, resembling that of a cord tied around a growing vine or stalk. The girl had been unable to wear a shoe for months, the pressure of which would produce intolerable pain. I made an examination and found the disease, *ainhum*, well developed on left little toe. I at once completed the amputation with a scalpel which was almost complete by the constricted tissue. I now exhibit the amputated toe if any one wish



to see it. In ten days after the operation the child was well, and no trouble with the foot since.

* I immediately wrote to Dr. Pittman for literature on the disease, which he says is exceedingly meagre, though *ainhum* is mentioned in Dunglison's Medical Lexicon as being found among the negroes of Brazil, and means to saw, in the language of that country.

Dr. Pittman kindly referred me to the Transactions of the Pathological Society of London, Vol. XVIII, page 277, for histology, remedy, &c. I have been unable to get the book referred to, therefore the barrenness of this report.

I have in my library the "Principles and Practice of Surgery," by John Ashhurst, Jr., M. D., of Philadelphia, Pa. The disease, ainhum, not being mentioned in his work, I wrote him for the pathology of the disease and he answered my letter as follows :

PHILADELPHIA, PA., August 9th, 1880.

E. H. HORNADAY, M. D. :—*Dear Sir*:—Your letter of the 3d inst., is received. I regret I cannot give you much help in regard to the curious affection known as *ainhum* of which I have never seen a case, and which, as far as I am aware, has not been met with in this vicinity. There are several papers on the subject in the library of the Surgeon-General's office at Washington. From the little that I know of the affection, I should suppose that it presents some analogy to, though on the other hand, many differences from the perforating ulcer of the foot described by French writers. If I should hazard a surmise as to its cause I should suggest that it might arise from the peculiar conformation and position of the little toe, allowing the lodgement of foreign substances between the folds of skin in persons going barefoot. We know that stone is cut through by rubbing sand backward and forward in a groove, and a similar effect might be produced in living tissue.

I should be glad to see the report of your case when it is published.

Very truly yours,

JOHN ASHHURST, JR.

Gentlemen, *ainhum* is not a disease of paramount importance, yet is essential that the medical profession should be familiar with all the ailments to which the human family is heir, therefore, I am truly sorry that I am unable to enter more fully into the pathology, the undoubted pathology of the trouble in question.

The diagnosis is easy, and the treatment for the radical cure is the knife.

REPORT ON THE PRACTICE OF MEDICINE BY THE CHAIRMAN OF THE SECTION.

I. WELLINGTON FAISON, M. D., Fulton, Davie Co.

Read before the Medical Society of North Carolina at Asheville,
N. C., June 2d, 1881.

In making a report of the progress of the practice of medicine, I shall refer to those diseases most important to us as North Carolina physicians. I don't claim anything new in this report for myself, but merely to give you, in a condensed form, what you, as well as myself, have already read. I have tried to select every point worthy of your attention on the diagnosis, pathology and treatment advanced by scientific authorities after laborious researches, scientifically and clinically.

BRIGHT'S DISEASE—CAUSES OF CONTRACTED KIDNEY, AND ON THE DIAGNOSIS OF DIFFERENT FORMS OF NEPHRITIS.*

Ziegler, says the chief factor in the causation of granular kidney is not the degeneration of the parenchyma, but the non-occurrence of its regeneration which can restore it to its integrity. Simple fatty degeneration, which occurs in various diseases, in anæmia, and may be caused experimentally, has not succeeded in affording any explanation of granular atrophy. He starts with the investigation of senile atrophy of the kidney, in which, obviously in consequence of generally diminished nutrition, thus incur enfeeblement of the circulation, wasting of the glomeruli, first at the periphery, then disappearance of the tubules connected with them, and finally more or less extensive small-celled infiltration. The arterio-sclerotic form of granular atrophy stands next to this. Here, the most important changes are wasting of the glomeruli, collapse and atrophy of the tubules, and finally, hyperplasia of connective tissue. Fatty degeneration occurs secondarily, but the cells become smaller, like those of the looped tubes: most contain cylinders. The vessels are widened, and this seems to be the cause of the increase of urine, the embolic form is similar to the latter. By obstruction to the greater circulation, and increase of the heart's action, the same

*London Medical Record.

changes take place in the kidney, which apparently originate in wasting of the glomeruli, perhaps in consequence of exudation into the capsules. Great interference with the nutrition of the kidney of different sorts may lead to extensive degeneration of the parenchyma; but regeneration takes place if the glomeruli have not been involved, or if the destruction be not too great or continued. When the latter occurs, atrophy results; as occasionally happens, for instance, in acute jaundice. It may also follow parenchymatous degeneration, as seen in the small patches of atrophy on the surface of the large white kidney; but generally atrophy occurs only rarely. The glandular degeneration, in all three forms which he groups together as interstitial indurative nephritis, is of secondary importance. The atrophy of the tubules is the result of their abolished function. Of the destruction of the glomeruli, which latter depends upon fibrous hyperplasia of the capsules, or on a concomitant disease of the arterial system. Besides the forms of atrophy from compression, he gives three groups of atrophy of the kidney. The first, of which the type is the arterio-sclerotic form, is dependent on simple interference with the circulation, and must be distinguished from the inflammatory forms. In the second, he reserves all the degenerative processes which are followed by destruction of the epithelium (embolism, temporary ligature, chemical irritants), excluding regeneration. In the third group (interstitial nephritis) there is a combination of epithelial degeneration with other processes—cellular infiltration, proliferation of the epithelium of the capsules and glomeruli and wasting of the vascular tufts. Both the latter groups, which differ only quantitatively, not qualitatively, as in both there are epithelial degeneration and hyperplasia of connective tissue—are, nevertheless, to be kept distinct, as there is no “identical pathological principle,” as Weigert thinks.

Prof. Tyson, (*Philadelphia Medical Times*) speaking of the clinical significance of casts of the uriniferous tubules says that: (1) Hyaline casts are found in all forms of Bright's disease, as well as in temporary congestion of the kidney, active or passive. (2) Epithelial casts are found in acute, subacute, and chronic parenchymatous nephritis. In the latter two forms the cells are generally degenerated and fragmentary. (3) Blood-casts are found in acute parenchymatous nephritis, and where hæmorrhage have

occurred in the kidneys. (4) Pale granular casts are found in interstitial nephritis (contracted kidney) and in parenchymatous nephritis. (5) Dark granular casts are found in parenchymatous nephritis, acute and chronic, and rarely in interstitial nephritis. (6) Waxy casts are found only in chronic Bright's disease, and attend either of the three principal forms. (7) Oil casts are found in subacute and chronic forms of Bright's disease, and may attend any of the three principal forms, but are most numerous in chronic parenchymatous nephritis (fatty kidney). (8) Free fatty cells and free oil drops are found in chronic parenchymatous nephritis. (9) The form of fatty cell known as the compound granular cell is found in acute and chronic parenchymatous nephritis.

Prof. Rosenteins' (*Lancet*, September 15) conclusions of Bright's disease and primary cirrhosis of kidney : (1) The anatomical lesions of the kidney, which determine the group of clinical symptoms first described by Bright, always involve the parenchyma as well as the tissue of these organs. (2) There is neither an exclusively parenchymatous nephritis nor an exclusively interstitial nephritis. Experiment and clinical observation show that where a true diffuse renal inflammation takes place both histological elements are affected from the commencement. (3) The final issue of diffuse renal inflammation is the white kidney and the red granular kidney. They form from the anatomical point of view the atrophied kidney, and only differ in this, that the parenchymatous affection is more pronounced in the former, the interstitial affection in the latter. Clinically the two may be distinguished by analysis of the urine. The symptoms of atrophy are common to both modifications. (4) Clinical observation makes it very probable that, just like the white kidney, the red granular kidney ; or, as it is now called "primary cirrhosis," is preceded by periods of swelling ; and this is not contradicted by pathological research. (5) Bright's clinical description relates especially to the granular white kidney. In this form the morbid process passes through two stages which can be determined clinically as well as pathologically.

RHEUMATISM—NEW THEORY AS TO THE PATHOLOGICAL CHANGES IN THE BLOOD IN ACUTE RHEUMATISM.

Prof. Latham (*Cambridge Medical Society*) maintains that the first step was a lowering of the action of the "inhibitory chemical

centre," or nervous centre, which controls oxidation in the muscular tissue. Following upon this, the oxygen from the oxyhæmoglobin, instead of entering the muscular tissue to be exhaled therefrom in the form of carbonic acid gas, had its sojourn in the tissue shortened, and passed into the blood in the form of lactic acid (a substance which appears in muscle almost instantaneously with its death). That the oxygen acted also more energetically on the muscular tissue, and the resulting lactic acid being oxidized rapidly in the blood, instead of the muscular tissue, an abnormal amount of heat or pyrexia was developed.

He then argued that quinia lowered temperature by simply impeding the carrying of ozone from the lungs to the tissues by the red corpuscles, as in Binz's experiments with ozonized turpentine and guraiaicum; and so the remedy might act beneficially in rheumatism, but would have no effect on the *materies morbi*.

Salicylic acid, on the other hand, lowered the temperature and cured the disease by chemically combining with the substances from which the lactic acid is derived, and producing less heat than would from the oxidation of that substance. He recommends large doses to be continued for a long time.

Drs. David W. Finlay and R. H. Lucas (*Lancet*, September 20, 1879) compare results which attended the use of salicylates of soda with two other methods of treatment—158 typical cases, 60 by salicylate of soda, 60 by the old alkaline method and 38 by combination of alkalies with quinine. The average duration of pyrexia less with soda, next with alkaline, and longest with the mixed treatment.

Influence on condition of heart less with alkaline, next with soda, next with mixed treatment. The great probability is that the influence of any method of treatment in averting the tendency to heart affection is very small indeed.

It has been dogmatically asserted that pericarditis never supervenes after the system has been got thoroughly under the influence of the alkaline treatment; but this position is obviously untenable.

Relapse.—Most with soda, 26.6 per cent.; with alkalies and alkalies and quinia combined, 8.3 and 7.8 per cent. respectively.

In conclusion, we would say that cases occur which seem to be quite insusceptible to the action of salicin or its compounds. While

a few so speedily show its toxic effects (such as giddiness, sickness, headache and delirium) that its use has to be abandoned before it has had time to influence the rheumatism.

From the above statements it seems that we had better rely on the old alkaline treatment until further and better developments.

Prof. Bartholow, says, rheumatism seems sometimes to be of distinctly nervous origin. We now know that certain changes in the spinal cord, and injuries of nerves, are followed by joint inflammations similar to those of acute rheumatism. Again, the circulation of some organic acid in the blood has seemed to excite rheumatic inflammations; at least we know that the sweat and the urine are very acid, and endocarditis has been excited by injecting lactic acid into the peritoneal cavity of animals, and that rheumatic attacks have been induced by the administration of lactic acid for diabetes. There are three classes of subjects who are attacked by rheumatism; the cachetic, feeble and nervous; the obese, florid but flabby, drinkers of malt liquors; the vigorous and able bodied, who have inherited or acquired the rheumatic diathesis. The type of feeble, anæmic, nervous subjects. I decidedly prefer the tincture of the chloride of iron in half-drachm doses, well diluted with water. Dr. Russell Reynolds deserves the credit of establishing the fact that the tincture of iron is an efficient remedy in acute rheumatism. It cuts short the duration of disease and lessens the dangers of heart complications. Dr. Anstie pointed out another fact—its power of prophylaxis,—of preventing attacks that are impending. It is not difficult to conceive that whilst alkalis counteract or neutralize the acid of rheumatism, the mineral acids may prevent its formation. The joints be simply kept at rest, and if the pain is severe, some small blisters are applied around the joint, but not on it.

The second type, the florid, flabby malt liquor drinkers, the alkaline treatment should be used, given in full doses until the urine shall become alkalined and held so for several days, followed by the tincture of iron and quinine.

The third type: Vigorous subjects with acquired or inherited tendencies, are best treated with the salicylic acid and are often relieved with remarkable promptitude by means of it. Scruple doses of salicylic acid seem to be sufficient for most cases of rheumatism provided they are often enough repeated. It is more effective if

given in solution with an excess of alkali. If the signs of improvement are wanting after three or four days of persistent and efficient administration of the acid, nothing will be accomplished by its continued use.

Experience does not justify the local treatment of the rheumatic inflammations. Blisters do good only by relieving pain and rendering the blood alkaline. Pointing with iodine tincture, does not influence the disease either way. The best remedy for relieving pain, and at the same time promoting elimination is atropia which was first used and recommended by Dr. Harley—should be administered in one-eightieth grain doses near the affected joint hypodermically.

DIPHThERIA.

Nothing of value has been added to the perplexed theories of the cause and pathology of this most dreaded and fatal disease.

Dr. Pinkham, of Montclair, N. J., after diligently searching for the cause of diphtheria in a single family in that city, came to the conclusion that it was altogether of a local nature. The house itself was clean and well ventilated. The trouble was from the outside, and the foul air from an adjoining manure pit was carried by the cold air supply-box directly into the bed chamber, occupied by those attacked with the disease. During the malignancy of disease the wind was from the compost heap. Only such as slept in the room supplied by the vitiated air were attacked with the disease.

Dr. Burgen, of Wanego, Kan., says: If there is one place more than another which from its surroundings and locality would seem to be exempt from zymotic diseases, it is this. Still there has been diphtheria here and that of a severe type. He examined the house and surroundings, when the disease first made its appearance, and found them well suited with evidence for the development of any disease which filth produces. On the southwest side of the house and about seventy-five feet from it, was a hog-pen in miserable condition, the hogs were turned in and out of pen as if to spread the filth. Near there, was the well where they got all of their water supply. There has been no other cases of the disease here.

The similarity of diphtheria and membranous croup has been a mooted question for some time. The identity and non-identity both have their advocates. Dr. Van Geissen (before the Pathological

Society of New York) read a paper on the non-identity in which he asserted, that he had been unable clinically, pathologically, or microscopically to distinguish between them.

Treatment.—No specific treatment as yet has been discovered. Dr. Guttman, of Comstatt, proposes the use of muriate of pilocarpin (the alkaloid of jaborandi) as a specific. He is unable to decide whether the local or the general manifestations of diphtheria are the primary. He inclines to the belief that the local symptoms precede and give rise to the subsequent general condition. As a rule, the general disease is in proportion to the severity of the local lesion, pharyngeal or otherwise, and, moreover recovery sets in as soon as the local signs of the disease begin to abate. In April, 1879, he was called to treat a family of nine persons with diphtheria; pilocarpin in medium doses were administered; within a few hours a copious salivation was going on and “the diphtheritic membranes swam away in the flowing saliva.” Quinine was ordered internally, as well as a gargle of lime water and pepsine. All got well within two to four days. He gave sherry wine in teaspoonful doses repeated every two or three hours as an adjuvant to the pilocarpin treatment.

Dr. Guttman’s prescription :

R.

Pilocarpin muriate, gr. $1\frac{1}{2}$.

Pepsin, 3 ss.

Acid muriatic, gtts. x.

Aqua, ʒ viij.

M. Teaspoonful every hour.

Dr. Wurd, of New York, and Dr. Ady, of Liberty, La., have treated diphtheria with the pilocarpin with the same success.*

Dr. Billington, of New York still holds the views of its being a local disease, and that all of its constitutional symptoms are secondary results by absorption. In all of his observations in dispensary practice, he claims never to have seen a case but that the membrane always preceded the constitutional symptoms, and that the constitutional symptoms were always in proportion to the local manifestations of the disease, and furthermore, that local disinfectant treatment is beyond all comparison the most effective means for

*Subsequent observations have proven the entirely opposite.

most successfully combatting with the disease. He says : Avoid all irritation, use disinfectants, resist the temptation to remove the membrane by force, or chemical destruction. Nasal syringing with warm salt water and gargling with lime water he deems very important. He urges strict attention in using the douche. He advances nothing new as to treatment but to corroborate and make stronger his views as to the treatment advanced four years ago. Prof. Jacobi takes issue with him as to the lime water gargle.

Dr. Bosse, of Donenall, reports several cases treated with turpentine in two and three drachm doses according to age of patient, followed by copious draughts of milk. The turpentine to be repeated if necessary. His usual treatment (ehlorate potash in lime water with syrup of Peruvian balsam and locally painting with the balsam) was continued after using turpentine. Within twenty-four hours, the false membranes were found broken, loose and raised.

Dr. Annuschatt, of Liegnitz, has thrown aside the ordinary remedies, (ehlorate potash, salicylic acid, benzoate soda, inhalations of lime water and of lactic acid) and has decided upon the cyanide of mercury, two grains of the mercury to three ounces and a half of peppermint ; water, one teaspoonful given every hour day and night ; spray of benzoate soda and stimulants freely given—120 cases reported ; 106 recovered.

Henri Bergeron read a paper before the Société de Médecine on the treatment of diphtheria with hydrofluoric acid. Has tried it in twenty-four cases, seventeen of them very severe, five deaths, four of these being infants. The dose he has found suitable is one gramme for each cubic metre which the apartment contains, evaporated in the space of three hours. He claims : 1. That the inhalation has never produced injurious results. 2. All who have been submitted to this treatment for forty-eight hours have been cured. 3. The false membranes do not persist beyond the fifth day. 4. In no case has he observed paralysis supervene in the soft palate or elsewhere. No case of contagion has occurred among the attendants or the household.

Diphtheria is a very severe and serious disease, and that our approved remedies (so called) often fail to produce any effect upon it. So I have reported these different views on the treatment that they may be of service when everything else has failed.

TYPHOID FEVER CAUSED BY ORGANISMS.

Prof. Klebs has constantly found organisms in typhoid fever in the form of rods and unsegmented threads. The tissue beneath the typhoid ulcer is found to be full of these bacilli. In very recent cases they are found in the interior of Lieberkuhn's follicles; at a later period they pass into the tissue between these glands. In one case, of ten days standing, in which cerebral symptoms were specially marked, these bacilli were found in spaces in the pia mater. He believes that the local symptoms are in proportion to the number of bacilli present.

Prof. Flint says the antipyretic treatment of this fever has in the last few years elicited much interest and has apparently wrought an important change in practical medicine. Quinia will do it in some instances but will not do to rely upon. More reliable is cold, applied to in the form of cold bath, and wet pack. The cold bath is a troublesome method and frequently produces a nervous shock. The same results may be produced from the wet pack, which should be resorted to whenever the temperature reaches above 103° F. Under the theoretical view, that much of the danger is in some way dependent upon the degrees of the fever. We do not abort the fever by this method, but abate it.

Heat in the treatment of fever is highly spoken of by Dr. Allport. He says a careful analysis of the condition involved in this fever will convince me that the original difficulty is largely non-elimination. This it is which mainly aids in the generation of heat and the production of death. With these contingencies in view, a line of practice inducing vicarious elimination is indicated. Catharsis and diuresis being inadvisable, profuse diaphoresis becomes a desideratum, and for this purpose, nothing is so efficacious as the external application of heat. It opens the mouths of the tightly closed cutaneous pores, and liberates the perspiration loaded with the products of disease. Acting thus it becomes in the strictest sense an antipyretic. With cold, a shock is first produced impelling the blood to the véseecue and closing the cutaneous pores. With heat a subtraction of blood from the visceral organs is first produced, simultaneously seeking the surface. A quickly profuse perspiration soon occurs, and as the system is emptied of the accumulated poisons the temperature falls. His reasoning from a physiological standpoint seems quite rational.

Prof. Liebermeister, says that cold applications are contra-indicated where any hæmorrhage shall occur, the amount being ever so small.

The cold water treatment of fevers is losing favor. The hospitals in Vienna and Paris have declared against it. The mortality of Ulm, Stettin, Rhienan, and Ostprusser has been increased by it. Wunderlich, of Leipsig, reports a large proportion of deaths by this treatment, and Drs. Flamarion, Grimshaw, and Pepper hold the cold bath in decided disrepute.

Sir William Jenner asserts the impossibility of cutting short a case of typhoid fever by means of treatment. In treating cases it must be borne in mind, first, that the disease, in the majority of cases at least, is produced by the action of a small portion of the excreta from the bowels of a person suffering from the fever; the poisonous properties of this excreta may be destroyed by boiling the fluid in which they are contained; secondly, many of the worst cases have appeared to owe their gravity to exercise taken at a time when the nervous system could ill afford any strain, hence no typhoid fever case should be removed to a great distance if away from home. Diet should be liquids, with farinaceous and bread in some form if desired. Milk must be used with caution. If the curd be undigested great evils arise, and the patient is placed in jeopardy. Pure water given *ad libitum*. Use simple enemata if bowels are too much confined. Thus the fever is to be met by rest, quiet, fresh air, mixed liquid food and blood diluents and by the exclusion of fresh doses of poison. With high temperature a tepid bath or sponging will often produce quietude and sleep. Opiates are to be avoided. Careful attention to diet and avoidance of accumulation of undigested food, will exercise a decided influence over any existing diarrhœa. So long as not more than three to five actions occur in twenty-four hours, the looseness is rather an advantage. If constipation is present, with extensive ulceration of the ilium, then small sized enemata of their gruel every other day are safer than large quantities less frequently. The most important and not infrequent cause of inaction of the bowels in typhoid fever is deep ulceration of one or more of Peyer's patches. Large superficial ulcers favor diarrhœa; a single small deep ulcer will paralyze the action of the bowel, a most important point to bear in mind. This

state of things, too, is frequently the cause of excessive tympanitis, between the third and fourth weeks of the fever. Of all remedies, turpentine externally is most generally used at these times, with no diminution of the distension, charcoal to relieve fœtor, pepsin to promote digestion, alcohol in fit doses to improve nerve energy and so to increase the muscular power of the bowel. A long tube passed up the bowel will often be the means of discharging a large amount of flatus. The recumbent posture must be kept in interstitial hæmorrhage. If the hæmorrhage be sudden, copious, and repeated ergotine subcutaneously, with an ice bag over the ilium may be employed. The faintness due to hæmorrhage must not be removed by stimulants. Perforation is always fatal. He does not favor the cold bath treatment; but prefers large, warm moist flannel covered with oil silk to produce free action of skin which may be combined with the administration of warm bland fluids. To avert death from failure of heart's action, alcohol is the great remedy. Delirium due to fever is never conjoined with headache; headache in typhoid fever may be most intense, delirium most violent, but the headache ceases before the delirium begins; if conjoined, we must look for that rare complication—intra-cranial inflammation.

Tremor is sometimes excessive; in such cases it is almost always a symptom of deep intestinal ulceration. While admitting without reserve that heroic measures, fearlessly but judiciously employed, will save life where less potent means are useless, the physician whose experience reaches over many years will, on looking back, discover that year by year he has seen fewer cases requiring heroic remedies, and more cases in which, the unaided power of nature alone, suffice for effecting cure; that year by year he has learned to regard with greater diffidence his own powers and trust with greater confidence in those of nature.

INTERMITTENT FEVER.

The Cause of Intermittent Fevers and the Nature of Malaria : Prof. Klebs, of Prague, and Prof. Tomassi-Crudeli, of Rome.

Their researches were made from the soil and air of the infected districts from the Roman Campagna and the Pontine Marshes. If it be true that marshy districts are the favorite seats of intermittent fevers, it is not the less true that there are no fresh cases to be ob-

served so long as a sufficiently high level of water separates the soil from the air.

Further, it is no longer possible to consider malaria simply a marsh miasm ; for it is not found in every marshy district, whilst, on the contrary, it shows its existence in districts absolutely free from marshy ground, even where the soil has never been constantly wet.

It is also impossible to state a distinct connection between the chemical and geological structure of the soil and the manifestation of malaria. The accumulation of decaying organic material in large quantities is not sufficient alone to explain an outbreak of intermittent fever. All these conditions, have their part in the manifestation of the miasm are to be considered only as adjuvant causes. It has been established beyond doubt, that in malarial districts these distinct factors are necessary for the production of intermittent fevers. (1) High temperature of the air ; (2) constant moisture of the soil ; and (3) free access of air to the moist layers of the ground. To establish a substantial theory of a parasitic origin of malarial diseases it is necessary to prove (1) the constant existence of a definite species of organism in the malarial soil as well as in the air situated above such a soil ; (3) that this same species of organisms is alone sufficient, with the concurrence of any other disease-generator, to produce true intermittent fever. To obtain the latter proof it is also indispensable to experiment on animals ; and such an experiment would be the more conclusive, the better we should succeed in isolating an active organism from the marshy soil, and in introducing it in a suitable medium into the living animal.

Further, to enable us to recognize the disease produced in the animal by the introduction of the organisms as true intermittent fever. The conditions realized should be (1) the existence of distinctly intermittent feverish attacks ; (2) the enlargement of the spleen in the characteristic form ; that is, a well defined firmness of that organ, which is distinguishable from the enlargement of the soft septic spleen ; and (3) the absence of a noteworthy diminution of the weight of the animal, at least during the first feverish attacks ; lastly, we have to note another important kind of evidence for the malarial infection of animals ; that is, the existence of the charac-

teristic black pigment, the spleen, the liver, the marrow of the bones, and the blood, a pigment which contains iron in inorganic composition (recognizable by the blue color after treatment with ferro-cyanide of potassium and hydrochloric acid—a reaction not to be obtained with hæmoglobin). From the existence of iron in that form it follows that during life, and in the interior of the otherwise unaltered blood corpuscle, the hæmoglobin becomes decomposed and its iron set free by the influence of the malarial poison. In the first group of experiments two rabbits were injected with organisms collected from the slime and air of the Pontine Marshes. Every one of them showed intermittent fever after one injection. When they were killed they presented very marked enlargement of the spleen, which contained large masses of dark brown pigment. The spleen and lymphatic glands contained very small bright corpuscles, which developed, after twenty-four hours in a suitable medium, into threads filled with spores. Formation of pus or any other changes due to inflammatory or septic processes of different organs were entirely absent. In further experiments, the cultivated bacilli from the urine or isinglass mixture, furnished the material for the injections, with the same positive results. The soil, taken from different places in Rome in itself and the Agro Romano, proved, in nearly every instance, efficacious. But the injection with water standing over the marshy ground remained without effect. The experiment with soil free from malaria, produced septic symptoms, pus was found, pigment totally absent, and the spleen although enlarged, had lost its firmness.

Afterwards, Dr. Marchiafava at Rome was able to demonstrate spores and bacilli in the spleen, the marrow, and the blood of three persons who had died of pernicious fever, showing the same characters as those observed by Klebs and Tomassi-Crudeli. In summarizing the results of their investigations, they consider the following facts as proved: 1. That it is possible to reproduce malarial infection in every form in rabbits in which it is known in men. 2. That the malaria produced artificially in animals is generated by organisms existing in the malarial soil at the time when the outbreak of the fever has not yet taken place.

Dr. G. M. Sternberg, of the United States Army, is making researches upon suspended particles in the air of places liable to in-

fection in New Orleans, as well as investigating organized particles from the swamps and well known malarial regions in the vicinity of the city. With the view of verifying or disproving the observations of Klebs and Tomassi-Crudeli on the existence of spores in such localities.

His researches have not, as yet, been published but will be looked for with an anxious eye by the medical profession. The work is in competent hands and will do much to settle this very much mixed question.

The Pontine Marshes seem to be very favorable parts for the investigation of malarial poisons. It was here that Balestra several years ago found a species of alga which he declared the cause. Here, also, M. Lanzi and G. Terrigi, in 1875, found certain dark colored granules developing in decomposing slime, and identical as it seemed, with the melanine granules in malarial spleens and livers. Here, Klebs and Tomassi-Crudeli have made their researches, with much more scientific precision, which makes their chances of success worthy of more attention.

These investigators as well as some of our American writers claim that high temperature is essential to the development of intermittent fever. Prof. Flint says, it is almost never produced at a lower temperature than 60° Fahr. "Its evolution or active agency is checked by a temperature of 32°."

I have seen cases of well marked intermittent fever during the last winter while the ground was covered two feet with snow and the temperature anywhere from 15° above 0, down to 0, which was readily controlled by the antiperiodic treatment. Some may doubt the diagnosis, which was based upon these signs and symptoms: the cold, chilly stage, followed by hot stage, profuse perspiration and complete intermission of febrile action uncomplicated with any other disease.

Treatment with Pilocarpin.—Gaspar Griswold, M. D., (*New York Medical Journal*) says the salts of quinia are considered specific in malarial affections, and their efficacy is beyond question, but in many cases they do not act promptly enough. An agent is needed that will antagonize the essential conditions of a chill at once; which given during a chill, will cut short, and which, given just as a chill is threatening, will prevent its occurrence.

A great many remedies have been administered to produce such an effect ; such as sinapisms, tourniquets to the limbs, cups (wet and dry) to spine, alcohol, opium and many others to no marked cases of intermittent fever. At the time when each paroxysm was due, and two or three minutes after the chill had fairly begun, gr. 1-5th of the muriate of pilocarpin was administered hypodermically, patient's temperature taken every thirty minutes, after the pilocarpin was administered ; and the paroxysm aborted, terminating in the sweat caused by the medicine—no hot stage occurring. The remaining case, the patient was a very large man, and the dose did not produce marked diaphoresis ; the chill was not interrupted, its severity was diminished, and the pains in the back and loins disappeared. A hot stage occurred, shorter and less intense. A larger dose might have acted as in the other cases. (2) In all the cases recovery followed the administration of a single dose of pilocarpin ; in no instance did another chill occur. From these cases it seems fair to conclude (1) that pilocarpin, administered hypodermically, will promptly cut short the chill of malarial intermittent fever. (2) That in a large proportion of cases so treated the paroxysm aborts, terminating in the sweat, caused by the pilocarpin, no hot stage occurring. (3) That such abortion of a paroxysm is in itself sufficient to effect a cure in many cases. (4) That such an abortion is a valuable adjuvant to treatment with quinia during the intervals. (5) That a dose of pilocarpin sufficient to produce this effect acts gently, without causing exhausting diaphoresis or unpleasant ptialism. (6) That the promptness with which an adequate dose of pilocarpin interrupts a chill is suggestive of its possible efficacy in cases of pernicious intermittent fever, where prevention of the full development of a paroxysm is often of first and all importance.

Rokitansky corroborates this treatment. A case came under his observation that had been treated twenty-one months with the quotidian and tertian type. The case had just gone into the quartan type (the most unsatisfactory type of all) when he first saw it. He at once administered hypodermically the pilocarpin—the next paroxysm was much lighter—another injection cut short the disease entirely. The firm splenic tumor began to reduce at once.

Dr. Tabercoorn reported to the Caucasus Society, that he had ob-

tained brilliant results with the etherial oil of mustard in the treatment of malignant malarial fever while stationed in Moldavia. He gave two to three drops of oil in large quantities of distilled water, or two to four drops in a 10 per cent. alcoholic solution. He claims for the oil excellent antiseptic qualities; destroying bacteria in the solution of one part to 9 ozs.

Dr. J. H. Hervey, of Indianapolis, speaks very highly of iodine in intermittent fever. I have tried it several times with but little benefit if any at all.

SYMPTOMATOLOGY AND TREATMENT OF INTESTINAL OBSTRUCTION.

Dr. James T. Goodhart proposes a very useful classification into acute and chronic forms of intestinal obstructions. Under acute head: he places (1) Interstitial strangulation; (2) Volvulus; (3) Intussusception; which latter may also be chronic. Under head of chronic are: (1) Intussusception; (2) Contractions; (3) Strictures. Besides these are rare forms of obstruction from gall-stones and various foreign bodies. Symptoms with acute forms are sudden vomiting and constipation; the constipation is generally absolute, but there may be small passages. Abdominal distention, tympanitis visible peristalsis, the vomiting soon becomes stercoraceous. In chronic cases, the general history is of paroxysmal colics for some time before the onset of more urgent symptoms. Abdominal distentions slowly increase to an extreme degree. The vomiting and absolute constipation come on at a late period. Visible muscular action is usually a prominent symptom.

The first point to be observed in the treatment is that of denying the patient both food and drink. He should receive nothing but nutrient and stimulating enemata. No solvents with the view of liquefying the feces should be given, as post mortem examination have determined the fact that the contents above obstruction are always liquid. He advises the use of opium not only for the relief of pain but after it acts in these cases like a purgative, by relieving the constriction.

Dr. W. H. A. Jacobsen advises the avoidance of opium, if possible, as it has a dangerous tendency to mask symptoms. All agree as to the general efficacy of belladonna; but must be administered in very large doses. The indication of over-distension must be

duly considered, for this purpose, puncture of the coil of intestine above stricture has been highly recommended.

If practiced though, great quiescence of the intestine must be obtained by an extra dose of morphia. The point selected for puncturing should be in the highest and central part of the distended coil. Should drugs fail and puncture be inadmissible, still two courses are left to pursue, abdominal taxis, and exploratory incision, followed by surgical or mechanical treatment of the obstruction. Taxis, as a rule, should be first tried, but remember well, that it should be done early or it will do much harm to the constricted and already weakened intestine. In performing taxis, Mr. Hutchinson's directions are that chloroform be used, that a copious enema of water be forced, by help of a tube into the intestine, and then, upon the escape of water, the patient be inverted and the intestines be firmly pressed as high up as possible in the abdomen. Should all of these measures fail, gastrotomy should be performed under the following conditions: 1. It should be done earlier than has heretofore been the case. 2. It should be done antiseptically. 3. It should not be done when symptoms of peritonitis or enteritis have set in. This last rule won't stand good in all cases, as a case operated on by Dr. Cormack in which the intestines were found agglutinated with lymph, while the strangulation had already begun to slough, recovery ensued, but with an artificial anus.

Boudet de Paris, gives account of two cases of obstruction successfully treated by electricity. Electricity, in the shape of internal galvanism and abdominal faradization, was resorted to as a last resource, the result most gratifying. The negative pole was placed in the rectum, and with the positive the abdominal muscles were dabbed so as to produce interruptions. When paralysis of the intestine exists, as it stimulates much more powerfully the unstriated muscular fibres, the interruptions must be slow, because the contractions of their fibres are not sudden but gradual. Care must be taken not to electrolyze the rectum by using a moderate current.

DIAGNOSIS AND TREATMENT OF ABSCESS OF LIVER.

Dr. M. J. Rochard says: The local pain is not manifested until the pus has reached the surface of the organ, and peri-hepatitis has

been excited. This symptom is absent often, even in cases of very large hepatic abscesses. Reflex pain in the right shoulder is frequently absent. The only symptoms on which reliance can be placed, are increased in the size of the organ, digestive and respiratory disturbances, and fever. In most of the cases, the hepatitis succeeds dysentery or dysenteric diarrhœa. When, in a subject who has suffered from either of these affections, fever occurs, the digestion becomes disturbed, and the liver enlarges. It may be concluded that hepatitis has been developed. If the fever present a remittent character, with evening exacerbations, preceded by rigors and followed by sweating, the formation of an abscess should be expected, and steps at once taken to test this diagnosis by puncture and aspiration. The abscess is situated in the right lobe seven cases out of ten, and in most cases projects at the convex surface of the organ. Dulness extends towards the nipple, and is bounded by a curve with its convexity upwards. The patient is troubled by cough, dyspnœa, and pain during inspiration, and occasionally auscultation and percussion reveal the sign of diaphragmatic pleurisy. In cases of this kind, the most favorable seat for exploration would be the eighth or ninth intercostal space, in a line with the anterior border of the axilla. When the purulent collection projects at the concave surface of liver, the false ribs are expanded, and the extent of the swelling may be made out by palpation. The spontaneous pains when they occur, radiate towards the iliac fossæ and the sacral region. Vomiting is a frequent symptom. Repeated punctures of the liver has been proved, by the observations of Jaccoud and Lavigerie to be absolutely free from danger. As to the treatment, of hepatic abscesses he advises free and direct incisions, combined with the practice of Lister's antiseptic method. Three cases are reported in which this treatment was carried out, with complete success by Dr. Stromeyer Little, of Shanghai.

NERVE-STRETCHING.

This has become to be quite an efficient and popular treatment for the many forms of obstinate neuralgias. The hyperæmic sheath and attachment of sheath with the nerve has proved to be the pathological change by many observers.

Dr. Bramwell reports (*British Medical Journal*) five cases of

sciatica successfully treated by stretching the nerve. His theory is that there is often an adhesive neuritis which binds the sheath by the nerve, the stretching breaks up the adhesions, the counter irritation produced by the operation is also of benefit.

Dr. Langenbeck reports a case of tabes dorsalis cured by stretching the two sciatic and current nerve. The stretching was done at different times and was performed antiseptically. The ataxic symptoms began to disappear very rapidly.

TREATMENT OF PNEUMONIC FEVER BY EMPLOYMENT OF WET SHEET.

Prof. Flint reports three cases of pneumonic fever, treated antipyretically by means of the wet sheet. The favorable course of the disease under this treatment was highly gratifying. The treatment is, as yet, a novelty in this country. His directions were to use the wet sheet whenever the axillary temperature exceeded 103° Fahr. The patient was to remain in sheet until the temperature in mouth fell to 102° or lower, watching pulse and symptoms. He claims that this disease is not due to any inflammatory influences, but to a special cause which produces this fever, attacking the lung tissue in same way as malaria attacks the spleen and liver.

In the spring of 1877 I saw a child 16 months of age with bilateral pneumonia following capillary bronchitis, all other means of treatment to reduce the high febrile action had failed completely in my hands, and seeing that a fatal result was inevitable, as the last hope and resource, I used the cold bath treatment, followed by the wet sheet treatment whenever the febrile action reached 103° Fahr. Improvement set in within twenty-four hours and recovery followed in a short while.

Fuming Inhalations in Asthma.—The following is the approximate formula of the quack remedy employed by the late Lord Beaconsfield with relief:

R

Potas. nitrat., 3 ss. ;

Pulv. anisi fruct., $\frac{5}{8}$ ss. ;

Pulv. stramonii fol., $\frac{5}{8}$ i.—M.

A thimbleful placed on a plate is pinched into a conical-shape, and lighted at the top, burns like a pastile, and is held near the patient, who inhales the fumes.—*Phil. Med. Times.*

UTERINE FIBROID COMPLICATING LABOR—WHAT IS THE PROPER TREATMENT ?

By W. R. WILSON, M. D., Townesville, N. C.

On the first day of April, 1880, I was summoned to visit Martha ———, a bright mulatto, aged 40, multipara, who on the day before aborted a five months fœtus. There was retention of the placenta and for this complication my services were desired. The patient informed me that she had not believed herself pregnant for she had been losing blood for six months or more and that at times the hemorrhage was excessive and that the only reason she had for suspecting pregnancy was her desire for certain articles of diet which she only fancied in the early months of her former pregnancies. Her appearance was confirmatory of her statements as to her continued blood loss for she was very pale and anæmic. The midwife in attendance told me that I would have a hard time in getting away with the afterbirth as it was adherent and would not yield to considerable force that she had used. Upon examination per vagina, I traced the umbilical cord into the uterine cavity, *past* a tumor filling and dilating the internal os. Placing my patient in the left lateral position and introducing Simm's speculum I found a large patulous os which being easily dilated. I could not only touch, but could see the base of a large tumor. Its appearance and the sensation communicated to the touch, fully corroborated the old midwife's statement of the force she had used in trying to pull it away, for it had been very roughly handled, being contused, lacerated and bleeding.

Bending the end of a uterine sound, it was very easily carried past the tumor into the cavity of the uterus and with very little trouble I was enabled to extract the placenta and membranes. The question then arose, what shall be done with the fibroid? Believing that the extra supply of blood to the uterus and to the tumors, dependent upon the pregnant state, would cease with the cessation of that condition, and involution of the uterus would most probably be accompanied by involution of the tumor, I left my patient with the promise that I would remove the tumor after her month was up should it then be thought desirable.

Two days afterwards, I was again sent for and found evidences of

a commencing septicæmia. Pulse 120. Temperature 103° F. Disposition to diarrhœa and a very decidedly disagreeable odor. Upon examination I found the tumor existing breaking down, giving exit to a fœtid bloody discharge. I at once determined to remove the sloughing cause of her trouble. Fortunately the os was still patulous and the cervix easily dilated. Seizing the base of the tumor with forceps dividing the capsule with scissors, and then making a slip knot in some stout cord, and carrying it as high up upon the tumor as I could shove it, making strong traction by means of the cord and enucleating the tumor with fingers and instruments, I was enabled to remove and sever its pedicle with scissors. It was as large as an orange and was attached to the left lateral wall of the uterus. After trimming away the shreds of the capsular investment, a hot water douche carbolized stopped all oozing, cleansed the cavity and *secured* good uterine contractions. In a short time after the operation the pulse was 100 and the temperature 100° F. The after treatment was quinine in 10 gr. doses three times a day, nourishing diet, and locally, carbolized hot water douches twice a day. Under this treatment she made a rapid and uninterrupted recovery.

In the April number, 1880, of the *American Journal of Obstetrics* is published a report of the Transactions of the Obstetrical Society of New York City, at its meeting December 2d, 1879. Dr. P. F. Mundé "presented a puerperal uterus containing a pediculated and an intra-mural fibroid, and among other questions raised was that of the propriety of enucleation of such tumors immediately after labor."

Dr. Barker objected to the operation under such circumstances because of the increased traumatic surface, favorable to the absorption of septic material.

Dr. Luck suggested that the necessary injury to the uterine mucous membrane would leave a sloughing surface.

Dr. Ward was unwilling to operate under such circumstances, mentioning several cases in which, after labor, there was almost complete involution of such tumors.

Dr. C. C. Lea, while admitting that both in interstitial and in intra-uterine fibroids, involution, after labor, was a frequent termination, yet, mentioned cases, with which he was familiar, in which

fatal post partum hæmorrhage had occurred because of the inability of the uterus to contract over the site of such tumors promised to be easily accomplished, he thought it judicious to get rid of a sloughing mass and though the area of raw surface would be increased, yet the patient would be less liable to septicæmia.

My own case was treated before I had read the above discussion and I had not, therefore, the benefit of the opinions of such eminent gynecologists, and finding a discrepancy of opinion as to the treatment to be followed in such cases, and believing that the proper solution to the question is to be found by comparing the experience of difficult observers, I place this case upon record, hoping others will follow suit.

THE NORTH CAROLINA MEDICAL JOURNAL offers as a premium for the best prepared and complete herbarium of the medicinal plants of the State, the following works, or their equivalent, in volumes the successful competitor may choose :

Curtis' "*Woody Plants*" and "*Catalogue of Indigenous Plants*" in one volume.

"*Fluckiger and Hanbury's Pharmacographia*," one volume ; and "*Flora Americæ Septentrionalis ; or a Systematic Arrangement and Description of the Plants of North America*." By Frederick Parsh, two volumes.

The collection must be prepared by the person presenting it. Each specimen must be neatly mounted on stout white paper 9x14 inches, (two or three specimens can be put on a sheet when they are small) and the name marked on each. This offer is made to members of the State Medical Society, and to licentiates of the Board of Examiners who may not be members.

Herbaria must be sent in on the 2d Tuesday in May, 1882, at the Concord meeting. For further particulars address Editor of the JOURNAL.

Supra-Pubic Lithotomy, was recently performed on a patient 61 years of age, and a stone was extracted measuring 3 3-5th inches in length by 2 3/4 in width, weighing 11 1/2 ounces. The patient died in six days after the operation.—*Med. and Surg. Reporter*.

REVIEWS AND BOOK NOTICES.

HUMAN AND ANIMAL VARIOLÆ; A STUDY IN COMPARATIVE PATHOLOGY. By GEORGE FLEMING, F. R. C. V. S. Army Vet. Inspector; President Royal College of Veterinary Surgeons. London: Baillière, Tindall & Cox. 1881. Pp. 61.

It has long been evident to students of vaccination, that the natural history of cow-pox and its relation to small-pox would have to be re-written by those versed in animal pathology. The assertion and denial of the identity of cow-pox and small-pox, must be without end, as long as both parties to the controversy only have recourse to whose meagre observations and plausible analogies of Jenner and his immediate followers.

We hail this contribution as the most important study so far made, upon the subject of the identity of cow-pox and small-pox. The author has brought peculiar ability to his task, and he has succeeded in setting at rest, in our opinion, this doctrine, by a cogent and masterly negation.

Those of our readers who are familiar with the earlier literature of vaccination,—a literature fast disappearing from the best book-collections,—will remember how much stress was laid upon the doctrine of the nature of cow-pox. These early teachers found it necessary, in order to perpetuate an unbroken succession of vaccine, to discover and lay down fast rules for the production of vaccine in time of necessity. This they did with such a show of reason, that some of the best vaccinologists, notably Seaton, have given their endorsement and support to the doctrine of identity.

On the other hand, very many conscientious investigators, who at first accepted unconditionally the theory that cow-pox was but small-pox modified by its transmission through the system of the cow, and that to produce the precious material it was only necessary to follow the experiments of Thiele and Ceely, and insert the variolic fluid into the mucous membrane of the nostril or vulva of a heifer that had not had previously cow-pox in the natural way, and the result would be a genuine crop of cow-pox vesicles. All of this class, save alone Gassner, Thiele, Sunderland, Badcock, and Ceely and J. C. Martin of Mass., have not only failed to corroborate this early teaching, but have been warned by the disaster of resulting

small-pox in a few cases, that the practice is useless and dangerous. The writer of this is able to add his personal experience in attestation of the latter fact.

Mr. Fleming has for many years devoted much attention to the solution of the question of identity, and in this brochure he ventures to dispute every one of the arguments brought forward to prove the human variola and cow-pox are due to the same virus, or are the same disease. With regard to animals he believes that every species has its own independent and particular kind of variola. The virus of human small-pox when deposited in the skin of the cow, does give rise to local papulation,—after very trifling, exceptionally very marked—yet this is not the regular eruption of cow-pox, either in its appearance or course, and it does not prevent the cow being successfully vaccinated at the same time; * * * and experiment has demonstrated that no more in the organism of the horse than in part of the ox can human variola be transmuted, but that after passing through the bodies of solipeds, and again transferred to man, it has lost none of its characteristic features. P. 5.

It has been stated that cow-pox is now a very rare disease, and that the probable cause for its being more frequent in the days of Jenner was the much greater prevalence of small-pox; thus leading to the inference that the one disease was dependent upon the presence of the other. But this statement will not bear close examination. It must be remembered that cow-pox had not been studied until Jenner's discovery, and its presence may have often been overlooked, or it may have been confounded with other bovine disorders. Soon after the announcement of the discovery of the protective value of vaccination, cow-pox was sought for and found in France, Italy, Prussia, Spain, and elsewhere. That cow-pox did appear, and that it was perhaps, somewhat common in that part of Gloucestershire in which Jenner resided, and indeed in many places in England, is not at all denied; but that its prevalence was owing to small-pox being rife, is opposed to all clinical and experimental evidence. Small-pox is transmitted with difficulty to the cow, and does not produce cow-pox. Page 6.

Mr. Fleming brings forward a most interesting account of the outbreaks of cow-pox, showing that so far from there being any relation between the existence of that disease and small-pox, that cow-pox occurred in localities where there was no small-pox, and

Dr. Henry A. Martin related at the last meeting of the American Medical Association the occurrence of spontaneous cow-pox and horse-pox in a locality where there was no small-pox at the time.

Another point as to identity is proven in those cases in which cow-pox and small-pox have run their course side by side in the same animal without coalescing or changing the character of either. Page 11.

The experiments of the noted Commission of the Lyons Society of Medical Sciences is concisely summarized, and will repay a careful reading. The French Academy of Sciences awarded the Montyon prize, value 2,500 francs, to Chauveau, Viennois and Meynet of the Commission, the following we extract from the verdict of the Academy: "In establishing that vaccinia and variola, notwithstanding the features which assimilate them in animals as man, are, nevertheless, totally independent of each other; that these viruses form two distinct individualities; that the two affections thus constitute two different, immutable species, which cannot be transformed one into the other; that, consequently, to seek to produce vaccinia from variola would be to pursue a dangerous chimera, which would revive all the dangers of inoculation of by-gone days." * * * *

But we will not dwell longer on this important treatise. Suffice it to say that the student of vaccination will not find a volume in which contains so much rare information on the subject of cow-pox. The best libraries would probably not furnish him a tithe of the information, and the American student would look in vain through all the range of English literature, and find nothing approaching it. We have studied its pages closely and with absorbed interest, and we express our acknowledgements to the distinguished author.

PUBLIC HEALTH PAPERS AND REPORTS. Vol. VI. Presented at the Eighth Annual Meeting of the American Public Health Association. New Orleans. December 7-10, 1880. With an Abstract of the Record of Proceedings. Boston: Franklin Press. Rand, Avery & Co. 1881. Pp. 496.

The volume properly opens with the address of the President, Dr. J. S. Billings. We presented our readers Dec., 1880, with a

full abstract of the admirable paper. It is the frank expression of one whose heart has been in the progress of all those sciences and arts which go to make up our social well-being. As chief officer of the American Health Association he does not treat his confrères to high sounding compliments ; but states in a straight forward way what has been done, and the means by which it has been achieved.

We can only make some short extracts here and there, and commend the address to our readers.

* * * * *

“ While much of the cheap and easy declamation about sanitary matters, which is so prevalent, is of the nature of an advertisement, yet the froth and scum show that there is a current beneath, and to a great extent show its direction. Slowly but steadily there has arisen, and is growing, a belief that much of our sickness and death is preventable ; that we ought to be able to make our cities as healthy as the country ; to lengthen the average duration, and increase the comfort of human life ; and from people of all conditions, capitalists and laborers, from the mills and workshops of the North, the crowded streets of our great cities, and the low-lying, malarious prairies and swamps of the West and South, comes to the educated and thinking men of the country—to the engineers and lawyers and legislators, as well as to the physicians—a demand to put away the plagues which consume our children.”

The following paragraph will be readily understood by some pioneer sanitarians :

“ Those who have done the best work in public hygiene have not reaped corresponding pecuniary rewards ; nor is it to be expected, that, in this sense, the study of sanitary science, or the fitting of one’s self to act as a public health official, will pay the individual. You must work for other people’s benefit,—for people who will object to and grumble at your work, and resist, as far as may be, your efforts to add to their health and comfort, while preventing them from interfering with the health and comfort of others. ‘*Sic vos non vobis* ;’ and unless you like study for the sake of the study, and the work for the sake of the work, you will not continue long to make sanitary science and art your principal occupation.”

* * * * *

“ It is very easy to be cynical over public-health organization and

administration, not only in this but in all countries. What is done is so far short of what might be done,—the practice corresponds so little with the theory,—that there come hours in the life of every sanitarian when he is inclined to think that it is a waste of time to contend with the self-satisfied ignorance or short-sighted selfishness which oppose every effort of prevention or restriction of disease. Such moments of doubt and discouragement are, however, by no means peculiar to sanitarians. They come to every man; and it is fortunate for civilization, morality, and science, that they come but seldom, and are usually of brief duration. The truth is as Kingsley says, that the egg is by no means addled, though the chick often breaks the shell in a somewhat cross-grained fashion.

“We pass to and fro, through our nights and days, like a shuttle through the web, occasionally catching a glimpse of the pattern which we are helping to weave; but these glimpses are few and short,—quite as often on the wrong side as the right. The pattern is very large, and each of our lives forms but a single thread in it, hence it is strange that it often seems distorted or shapeless, or that we cannot see the effect of labors.”

The contribution from the pen of Dr. T. J. Turner, “On the Hygiene of Emigrant Ships” has already been received as a thorough review of the conditions to be corrected, and an exhaustive digest of the proposed means to cure the evils.

Dr. Ezra M. Hunt shows the acuteness of his philosophic mind in the discussion of “Our Present and our Needed Knowledge of Epidemics.” He undertakes to point out the stand-point from which contagia must be studied, before we can inaugurate the successful practice for the prevention of epidemicity. He summarizes his thoughts, and in this summary he gives proper place to the germ theory when he says, whether microzymes are the causes in zymotic diseases by pathological changes they bring about or not, that “they make a crisis in a disease, is to be gravely suspected, but is not yet investigated so as to be accepted as proved.”

“The Relations of Schools to Diphtheria and to Similar Diseases” is the caption of an illustrated article by Dr. Henry B. Baker, of Lansing, Mich. The writer has taken great pains to investigate the causes of the prevalence of diphtheria, and points out that the periods of the greatest prevalence are during school-sessions.

His argument is well stated and abundantly fortified, but we trust Dr. Baker will continue his researches.

We had occasion in Volume I, page 179, of the JOURNAL, to point out the relation between the prevalence of diphtheria and soil-soakage. It will be remembered that our collation of items showed that among the whites, the greatest number of deaths from diphtheria occurred during the rainy season, and the parallel with the blacks was nearly coincident, for a shorter number of years. Reviewing our investigations recently we could not trace the connection of the prevalence of diphtheria during school terms. *En passant*, we will say, that our observations have not inclined us to the belief that diphtheria is an exceedingly contagious disease, like scarlet fever. Doubtless it has its law of contagion, but it has not yet been worked out. There are many valuable papers we have not noticed. We hope to resume the review some other time. We have only praise to offer for the excellent work done by the American Public Health Association, and this is to be expected, for without exception, it is the best working scientific body in the United States.

THE APPLIED ANATOMY OF THE NERVOUS SYSTEM. Being a Study of this Portion of the Human Body from a Standpoint of its General Interest and Practical Utility. Designed for use as a Text-Book and a Work of Reference. By AMBROSE L. RANNEY, A. M., M. D. With Numerous Illustrations. New York: D. Appleton & Co., 1, 3 and 5 Bond Street. 1881. Pp. 500.

This volume comprises a course of lectures delivered by the author before the Students of the Medical Department of the University of New York. The author says: "The rapid strides which are being made in the interpretation of the symptoms of nervous diseases and the introduction of many new terms which must embarrass the reader of late treatises, unless he be educated up to the present standard of knowledge in this field of medicine, seem a reasonable ground for belief that there is a demand for a volume which shall fit the practitioner and student to pursue the studies in this special line without embarrassment, if not with increased interest."

We think the author has correctly estimated the necessity for

such a volume, and we congratulate him upon the manner in which he has executed his task. The editorial skill which he has brought to bear in collecting such valuable material, particularly the illustrations, is highly commendable. While his teaching by diagrams is lucid enough, the beautiful engravings borrowed from Sappey and Hirschfeld are highly instructive. The liberal publishers have enabled the author to repeat the engravings 79, 99, and 100, so that in following the descriptions of the glosso-pharyngeal, spinal accessory, and hypo-glossal nerves, it is not necessary to turn back to the first engraving. The cut of the tongue from Sappey is very clear, and well drawn, its sharpness of outline being quite as good as an early impression from the block.

An idea of the way each subject is treated may be best obtained from the following summary of the glosso-pharyngeal nerve :

The anatomy of the nerve is first given, and its anatomical relations. Its functions first as a motor and then as a sensory nerve are described. The act of deglutition and its mechanism are considered in all their physiological bearings, and, as in other parts of the work, they are made very plain by the excellent illustrations. This account is followed by clinical points of interest pertaining to this nerve. This method of treatment enhances the teaching quality of the volume, and will doubtless engage the attention of many readers who would not so readily take to the dry anatomy. As a companion volume to the recent works on diseases of the nervous system it is issued in good time, and will serve to elucidate the anatomical points necessarily omitted in works devoted to pathology.

A. SYSTEM OF SURGERY. Theoretical and Practical. In Treatises by Various Authors. Edited by T. HOLMES, M. A., Cantab., &c. First American, from Second English Edition, Thoroughly Revised and Much Enlarged. By JOHN H. PACKARD, A. M., M. D. In Three Volumes with Many Illustrations. Vol. I. Philadelphia : Henry C. Lea's Son & Co. 1881. Pp. 1007.

It has been twelve years since the second English edition of Holmes' Surgery was issued. Surgery has made great strides in these few years, and still this work has held its position easily. The price at which the original volumes was sold, debarred many

American readers from adding them to their libraries, but Holmes' Surgery is not a stranger in this country. It has been the guide and counsellor of many a perplexed physician, and upon the whole has proven itself as an helpful adviser as could be desired.

To those who are not familiar with this Surgery we will explain the plan of its construction. Under the editorial management of Mr. Timothy Holmes, a corps of eminent surgeons was organized, and the whole surgical field divided up among those having reputation in special departments. In this way an encyclopædia of surgical art and science has been produced, of exceptional merit. For instance in the volume before us which represents Volume I, and part of Vol. II of the English edition, the following subjects are treated:

Inflammation, by John Simon, Esq., and J. Burdon Sanderson, Esq., M. D., the whole revised and brought down to the present state of our knowledge by the American editor, Dr. J. Henry C. Simes; *Hectic and Traumatic Fever &c.*, by John Croft, Esq., with no additions by the American editor; *Collapse and Scrofula*, by Mr. Savory; *Syphilis*, by Mr. Henry Lee, revised by Dr. J. Nevins Hyde; *Tumors and Cancer*, by Sir James Paget (1860) and C. H. Moore (1860) revised by Dr. Morris Longstreth; *Microscopic Structure of Tumors and Cancer*, by Henry Arnott, revised by Dr. Simes; *Abscesses and Gangrene*, by Mr. Holmes Coote, revised by Dr. P. S. Connor; *Sinus and Fistula, and Ulcers*, by Sir James Paget, revised by Dr. Connor; *Wounds*, by Sir James Paget; *Burns and Scalds*, by Mr. T. Holmes; *Animal Poisons*, by Alfred Poland, Esq., revised by S. Ashhurst, M. D.; *Wounds of Vessels*, by Mr. Charles H. Moore, revised by Dr. L. A. Stimson; *Fractures*, by Thos. King Hornridge, Esq., revised by Dr. John H. Packard. Without enumerating the entire list we will mention that the contributors are among the best surgical writers in Great Britain.

A comparison of this volume with the English one, shows that the American publishers have well considered and executed their work. The pages have been increased in size, and a smaller type used, but the pages have been considerably set in double column, facilitating greatly the pleasure of reading. The lithographic illustrations are good reproductions of the English originals, and the volume is supplied with a complete index, thereby rectifying a

defect in the original. The wood-cut illustrations added by the American publishers are numerous, many of them reproductions from standard authors, and designs from specimens from the Army medical museum.

The American revisers have added largely to the original text, and for the most part have enhanced its value. American editing, we will here state, is no longer the objectionable thing it was formerly held to be, if we may take this work as an example. American Surgical teachers of international reputation, have done such excellent work in this instance, as to make it desirable for those already possessing the English edition, to add this one also to their libraries.

The exhaustive manner in which every article is treated is best exemplified by a perusal of the article on inflammation. In the second original edition this subject was treated in the first volume, but the researches of Conheim and others rendered it necessary to re-write the article for the fifth volume. The article in the American volume has grown to the dimensions of nearly a hundred double-column pages, with few intercalations by the American reviser, the most important of which is the knowledge of the relative proportion of blood-corpuscles during inflammation.

As we expect to return to this work in a future number, we will heartily commend it to our readers, and thank the enterprising publishers for the handsome way the volume has been brought out. The half-Russia binding is elegant and durable.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third Series. Volume 5. Pp. clxxiii—123.

The friends and admirers of the late Professor George B. Wood, M. D., Isaac Hays, M. D., Prof. James Aiken Meigs, M. D., and Isaac Ray, M. D., will here find excellent memoirs of these gentlemen. It is seldom that a country is called upon to lament the death of such a group of medical men. In their spheres these gentlemen were the leaders, and occupied the position of teachers of several generations of physicians from all parts of this great country. These carefully prepared memoirs will greatly interest old pupils, who cannot fail to read of the achievements of their teachers with admiration.

The medical contributions are : "Foot-Binding in China," by

Robert P. Harris, A. M., M. D. ; "Account of a Case in Which Heart-Clot Occurred as a Consequence of Uræmic Convulsion and Tumors in the Heart," by Arthur V. Meigs, M. D. ; "Report of the Committee on Meteorology and Epidemics for the Year 1878 and 1879," by Richard A. Cleeman, M. D. ; "Case of General Hyperostosis," by James H. Hutchinson ; "Cases of Starvation Fever," by J. M. DaCosta, M. D. ; "Report of a Case of Diabetes Mellitus in Which Double Cataract Existed," &c., by J. Ewing Mears, M. D. ; "Thoughts upon Vivisection, With Reference to its Restriction by Legislative Action," by Geo. Hamilton, M. D.

The volume is handsomely printed, but it would have been greatly enhanced in value if portraits of the subject of the memoirs had been inserted.

THE DISPOSAL OF GARBAGE. Prepared for Free Distribution by the North Carolina Board of Health. 1881. Pp. 20.

This pamphlet is the substance of a paper read before the New Hanover County Board of Health, and by resolution of that body referred to the Mayor and Board of Aldermen of the city of Wilmington, for their action. This course was rendered necessary because the law gives only advisory power to county boards of health, except as to the control of inland quarantine and the abatement of nuisances. It is hoped that the city authorities will see plainly all their duty in this matter, and demand the execution of the plan here marked out.

The pamphlet contains nothing new, and it is well it does not, for it is very difficult to get well known lessons on this subject executed.

A systematic plan is recommended for the daily scavengering of the streets and the removal of night soil, and also for their destruction or utilization. The use of the domestic garbage burner there figured strikes us as being a solution of the troublesome question asked by every careful housekeeper, What shall we do with garbage? The garbage burner is placed upon the stove like any other kitchen utensil, the garbage is dried, all the vapors arising from it being consumed, and when thoroughly dried the contents are dumped in the fire and burnt up.

A copy of this pamphlet is offered free of charge to every citizen interested in keeping his home cleanly and healthful,—and who is not interested?

INTERNATIONAL MEDICAL CONGRESS.

Letter of DR. J. MILNER FOTHERGILL to *Medical Times*.

The great International Medical Congress has come and gone, and a monster gathering it has been,—one that will be memorable for long,—representatives of medicine from far and wide. France sent Charcot, Bouchut, Léon Labbé, Guéneau de Mussy, and others; Germany, Virchow, Langenbach, Liebreich, Volkmann, Busch, and a host more of well-known names; Braun Kaposi, and a few more came to represent Austro-Hungary; Italy sent Bacelli, Tommasi, Casselli, and other illustrious representatives of medicine; Donders and Stokvis head the list of those who came from Holland; Reverdin brought some colleagues from Switzerland; Russia sent a contingent with the most wonderful names; while other countries even to the Argentine Republic, were represented. The United States of America were well represented by Fordyce Barker, Austin Flint, Marion Sims, Lewis Sayre, G. M. Lefferts, Paul Mundé; by Bigelow, Otis, H. C. Wood, Minis Hays, Billings, D. W. Yandell, R. Battey, Davis of Chicago, and a legion of others whose names are too numerous for mention. The venerable and sombre College of Physicians looked quite gay with the awning on each side of the entrance,—like an old dame in a clean apron. The informal reception was held on Tuesday afternoon, when the College was crowded by faces and figures unwonted and unfamiliar to it. Some new pictures were mustered to smarten up the old walls. On Wednesday morning the first meeting was held in St. James' Hall, which was completely filled. Royalty was present in the form of the Prince of Wales and his brother-in-law the Crown Prince of Germany. Sir William Jenner opened the proceedings, speaking somewhat nervously, interrupted by repeated bursts of applause. William MacCormac, the Honorary Secretary-General then read a lengthy report, which was listened to somewhat impatiently. He told of the labors of the officials, the generosity of certain sections, the myriads of circulars issued,—indeed, the Atlas-like performance which had been achieved. Letters in their native languages had been addressed to such foreign potentates as the Emperors of Russia and Japan and others, who had graciously acknowledged their receipt. The names of the commissioners from the various

foreign countries were then formally read. He concluded by announcing that a commemorative medal had been struck, in the preparation of which some of our first artists had been engaged, so that "no effort had been spared to make the meeting a success." This tedious matter being completed, Sir James Risdon Bennett, as Chairman of the Executive Committee, then spoke, bursting into French, to the surprise of many, giving all a hearty welcome. The Prince of Wales, who is a very happy speaker, then spoke a few sentences which called forth repeated applause, and declared the Congress open. After this, Sir James Paget delivered an address in his wonted mellifluous language, in which he alluded to the advantages which accrued to all from such gatherings, with their interchange of thought; pointed out how an intellectual advance in one direction was usually accompanied by almost synchronous progress in others, instancing how the researches into minute organisms apparently destitute of any practical value had led to some most important doctrines in organic chemistry,—had brought about a most beneficial change in practical surgery, and promised to do as much for medicine; they concerned the highest interest of agriculture, while their influence probably did not rest here, but had promise in the future. It was all spoken in the most natural manner, yet it is asserted that it was a great mnemonic feat, as it was all already in print and was committed to memory word for word. If this is so, it only makes it all the more remarkable as a performance of no ordinary character.

The first meeting was a complete success. At 2 P. M. the Sections commenced work in earnest. The Anatomy Section was presided over by Prof. Flower, F. R. S., supported by Macalister, of Dublin, and Turner of Edinburgh. Physiology was presided over by Michael Foster, F. R. S., the illustrious Cambridge professor and well-known author of the *Hand-Book*, with Pavy, F. R. S., Rutherford, F. R. S., of Edinburgh, and Purser, of Dublin, to assist him. Pathology found S. Wilks, F. R. S., worthily filling the chair, with Sayer Bristowe, F. R. S., Jonathan Hutchinson, and Burdon Sanderson, F. R. S., as Vice Presidents. In Medicine, Sir William Gull, F. R. S., presided, supported by Prof. Gairdner, Geo. Johnson, F. R. S., R. Quain, F. R. S., and William Roberts, F. R. S. Surgery found Erichsen in the chair, with E. H. Bennett, of Dub-

lin, Humphrey, F. R. S., of Cambridge, and Savory, F. R. S., supporting him. In Obstetric Medicine, McClintock, of Dublin, was in the chair, with Barnes, Braxton Hicks, F. R. S., Matthews Duncan, and Priestley as Vice Presidents. Diseases of Children was presided over by West, aided by Dr. Gee and Timothy Holmes. In the Section devoted to Mental Diseases, Lockhart Robertson was in the chair, supported by Crichton Browne and Maudsley. The ninth Section embraced Ophthalmology, with Bowman in the chair, and Critchett, Henry Power, Argyl Robertson, and Swanzy as Vice Presidents. Diseases of the Ear found Dalby presiding, with Cassells, of Glasgow, and Fitzgerald, of Dublin, to support him. The eleventh was devoted to Diseases of the Skin, where Erasmus Wilson presided, with Cheadle, of St. Mary's Hospital, and Liveing to assist. Diseases of the Teeth had Edwin Saunders in the chair, with Tomes, F. R. S., and Spence Bate, F. R. S., as Vice Presidents. The thirteenth was State Medicine, presided over by John Simon, having for Vice Presidents George Buchanan, De Chaumont, Norman Chevers, Douglas Maclagan, and Netten Radcliffe. Military Surgery and Medicine had as President Prof. Longmore, with Sir Wm. Muir, Dr. J. W. Reid, and Sir Joseph Fayrer, K. C. S. I. and F. R. S., as Vice Presidents. Last, but not least, *Materia Medica* and Pharmacology, brought up the rear, with Prof. Fraser, of Edinburgh, in the chair, with Lauder Brunton, F. R. S., Rawdon Macnamara, and Sidney Ringer, as Vice Presidents.

It would be invidious to attempt to contrast one Section with another; there was plenty of work for all. Representative men were found in all Sections. I have the honor to conclude the big volume of over seven hundred pages, containing abstracts of the papers to be read in the different Sections; and when my paper was read, Lauder Brunton, H. C. Wood, and Sidney Ringer were there, the two first taking part in the discussion on "Strychnia as an Expectorant;" so that personally I can have no grounds for grumbling: and I believe others regarded themselves as equally fortunate. In each Section the President gave an introductory address, and Prof. Fraser told how the recent Anti-Vivisection Act was carried out practically. He had been refused a license to test the properties of a poison used by the natives of Borneo on their arrows, by the subcutaneous injection of the poison to rabbits. Scientific research

in England is evidently arrested for a time when even this may not be done by the successor of Sir Robert Christison in the chair of Materia Medica in the University of Edinburgh. The work accomplished everywhere told of zeal and enthusiasm, of an honest appreciation of the work of all, the speaker and the listener alike and in turn, each as ready to act as to learn, to listen as well as to be listened to. All, however, "knocked off," in workman's phrascology, early, to listen to Rudolph Virchow give an address on "The Value of Pathological Experiments." It appears that a new society for the protection of animals has been established in Liepsic, which is agitating for a law to punish vivisection by imprisonment and deprivation of civil rights. He held that if the advocates of vivisection cannot make good their claim before the world the cause must be looked on as a lost one. He pointed out how dissection of the human body fought its way against tremendous opposition. The discovery of "cells" was then given as an illustration of the aid science can give to medicine. He spoke warmly on behalf of the study of symptoms, now so much neglected. "Have symptoms no more any importance for the physician? Can a diagnosis be made without a knowledge of symptoms?" he asks, with a ring of audible scorn. It is the "why" of symptoms which gives them their value to the scientific physician. The progress of ophthalmology was used as an illustration. "The principle of modern medicine," he said, "is localization." Much more followed, wise, thoughtful, right minded, and full of interest, well worth reading and study by all, but which cannot be reproduced here: the address can only be recommended. It concluded with an eloquent defence of vivisection and vivisectors, their motives and their practices, against the calumnies uttered by their opponents.

After this address there followed a swift and complete dispersion of the individual units in their different festive entertainments, where hospitality profuse and unstinted was shown on all sides. Perhaps there may have been individual exceptions, but the general testimony was satisfaction to repletion; and with the general enthusiasm and *bonhomie* consequent upon a good meal, all met again at 9:30 in the South Kensington Museum to a *conversazione*, at which the Prince of Wales and the Crown Prince were present. This ended the first day.

On Thursday morning, work commenced by an exhibition of rare cases of living specimens in the Museum. A large number of the foreign visitors spent their morning in going over the leading hospitals, as Guy's, the London, St. Thomas'. It indicates the managing powers of the Congress that none of the many excellent special hospitals which exist in London, and which are quite taking the lead of the general hospitals in their special departments, were noticed at all in the proceedings. In the Section on Diseases of Children, Lewis Sayre's treatment of spinal curvature was resumed in discussion. All thinking and reflecting surgeons see the soundness of the plan and the utility of his jacket in bending and yielding spines, as a preventive, as well as in the rectifying of distorted spines.

The subject of localization of function in the brain received a considerable amount of attention. First, Brown-Séquard had his say against it; then Prof. Goltz blew his trumpet on the same side, and exhibited a dog in which he had successfully (?) destroyed all the so-called cerebral centres except the anterior-frontal convolutions; yet the animal, eight months after this mutilation, performed all its movements in a normal manner. Thus challenged, Professor Ferrier trumped Goltz's card with a monkey in which the centre for movement by flexing the fore-legs was destroyed, the animal manifesting undoubted and indisputable evidence of a corresponding loss of power. In this case the mutilating operation had also been performed a number of months previously.

The subject of antiseptic surgery was thrashed out in the Military Surgery and Medicine Section. Some microscopical demonstrations of double and treble staining tissues were given. The address on "Le Scepticisme en Médecine, au Temps passé et au Temps présent," to have been delivered by the late Prof. Maurice Raynaud, of Paris, was read by his friend, Dr. Féréol. A banquet was given in the evening by the Lord Mayor to two hundred and sixty of the members of the Congress. Here was again much private entertainment also.

On Friday all was in full swing at the sectional meetings. The subject of oöphorectomy was started by its originator, Battay, who pleased those whom he did not convince as to the possibility of diagnosing a misplaced ovary by external manipulation. At the

conclusion of the morning sitting in the Obstetric Section was held a meeting of American delegates to constitute a committee to thank the Britisher for his hospitality. Pallen was asked to take the chair, and he presided admirably. The stalwart figure of D. Yandell was seen to erect itself, and shortly the deep notes of his sonorous voice were heard in all their impressive slowness. The scene was an interesting one for a person who is not personally acquainted with Americans. The sonorous "ay," "ay," heard from all parts of the room when a motion was put, reminded one of the old Puritan ways, and contrasted with the noiseless lifting of the hand which is the practice with us. A handsome, tall, well-built crowd they were, very English-looking,—not one corresponding to the American caricaturist. Their expressions of satisfaction with their treatment were very gratifying to the ear of one of their hosts. The visits to the hospitals were resumed. The eloquent address of Dr. Billings on "Our Medical Literature" was listened to attentively by an admiring audience. Among other matters, he contrasted the profusion, the luxuriance of growth, of medical journals in his own country, with the paucity of like journals in England,—her old journals, however, being planted in very secure foundations, while very few new ones were started.

The medical ladies were indignant at being excluded from the Congress, and, smarting under the indignity, held a garden-party at their School of Medicine in the afternoon, at which a number of their sympathizers were present. (The daily press gave more prominence to those present at this gathering than at any other in the Congress. *Absit omen!*)

In the evening one of the most striking of all the receptions was held, viz., a *conversazione* in the Guild-Hall, given by the Lord Mayor and Corporation of the City of London to a certain number of the members of Congress and their ladies. The hospitality was at once generous and genial. A selected number of guests were invited; but the Londoner repeated what he practised when the British Medical Association was here in London,—viz., pushed in himself and almost overlooked his guests. Many who might very fairly have expected to be invited among these guests were overlooked, while very ordinary Londoners moved heaven and earth, or their local city equivalent, to procure tickets for themselves.

Fortunately all the rooms were thrown open, so that there was space for all the multitude who thronged there to see a sight probably few will see again. But of this I speak only from hearsay.

On Saturday morning the Sections went to work with a will, as there was much to be done in the way of excursions. In the Materia Medica Section, H. C. Wood opened a discussion on a most interesting subject,—“The Nature and Limits of Physiological Antagonism.” The subject of nephrectomy received further attention.

But Saturday is the day of excursions *par excellence*. At noon a large party went to visit the Sewage Farm of Croyden, to inspect the works, the farm, and the river Wandle, into which the outflow of the sewage farm falls, bright and transparent and containing shoals of fish. Others went to Folkestone to do honor to the memory of Harvey, the discoverer of the circulation of the blood, who was born there in 1578. On the tercentenary of his birth a memorial window was placed in the parish church. A movement was set on foot by Dr. G. Eastes, a member of the Harveian Society, to erect a statue to his memory at the same time, which has been successful. A handsome statue of Harvey was unveiled by Prof. Owen. C. B., who delivered an address in which he eloquently defended the practice of vivisection from the aspersions and calumnies of its wrong-headed opponents. The Southeastern Railway granted free passes, and the Mayor and Corporation entertained the visitors afterwards in the Town Hall with a handsome collation. Others wended their way to Hampstead as the guests of Mr. Spencer Wells, and enjoyed the garden-party much. In the evening a dinner was given to a party of the members at the “Star and Garter,” Richmond Hill, by the United Hospitals Club. All were ready for a quiet Sunday, regretting that Dean Stanley could not deliver the sermon which he had promised and to which all had looked forward with so much anticipation. The genial catholic-minded dean was lying beside his wife in Westminster Abbey, having died of erysipelas just before the meeting of Congress. Stanley, Rolleston, Raynaud, and many more who were to have taken part in the Congress have been removed by death since the first arrangements were made. Mr. Erasmus Wilson had a party of fifty down by a special train to visit him for the day at Margate. For the

bulk who remained at home the Botanic Gardens and the Zoological Society's Garden were thrown open. One of the curious accidents of imperfect arrangement was that on visiting the Zoo and presenting their card of membership the porters refused to admit any lady. "The card admits the member only," was the steady answer. To whose fault of omission or whose "pure cussedness" this ungallant conduct is due is unknown; but the step gave universal offence. It was at once uncalled for and discreditable; for the Zoo was just the place of all places to which to take a lady. Nor was the company gathered there very select. Most of the subscribers to the Zoo had left town and given the tickets remaining unused to their domestics, who naturally wished to see the doctors. Consequently, the members of the International Medical Congress had ample opportunity for observing on a large scale the domestics of our "good families" and their friends,—a well behaved but not a very distinguished section of the body social. This, together with the refusal to admit "ladies" with the members, excited a good deal of sharp criticism.

On Monday, the Sections went to work with a "slaughter of the innocents" in the way of getting through the papers remaining unread. The great event of Monday was the garden-party given by the Baroness Burdett-Coutts, in the afternoon. The weather, which had hitherto been all that could be wished, became contrary, probably surprised at its own good conduct, and a steady rain spoiled the programme, though some thousand and odd were entertained in doors. In the evening a dinner was given to the foreign members by the Society of Apothecaries, and later on there was a *conversazione* at the Royal College of Surgeons, which was well attended.

Tuesday was the last day. The Sections worked off their list as best they could. At 2 P. M., there was a general mutual-laudation meeting, as is the usual finish to such gatherings. Those concerned patted each other on the back, complimented each other, and were certain all had been managed to the best of human ability. And, on the whole, the thing was fairly managed. Of course there were "hitches," and some visitors overlooked who ought to have been honored; but, after all, the thing was creditable to man in his unglorified state. The seventh meeting of the International Medical

Congress was declared a complete success,—“ the largest gathering of medical men ever known.” The weather had repented itself of its outbreak of temper, and it was once more sunny and breezy when the remains of the Congress betook themselves to the Crystal Palace for a spell of relaxation. A few wended their way to the Isle of Wight to take their part in the annual meeting of the British Medical Association, which commenced at Ryde on Tuesday, the 9th, under the presidency of Mr. Benjamin Barrow. Certainly some fresh air and a taste of the “ briny” would be very acceptably after the sojourn in London. And so ended the “ monster Congress,” and—well, we are glad it is successfully over.

The meeting of the British Medical Association was a small one indeed,—but the semblance of a meeting; nor was there anything of interest brought forward in the Sections. Any man who had anything to say delivered himself thereof at the Congress. The British Medical Association meeting was but the “ after-pains” of the act of parturition.

WORTHY OF RECORD.

The Powell Manufacturing Co., of Baltimore, the manufacturers of POWELL'S BEEF, COD LIVER OIL AND PEPSIN, the superior food and nutritive tonic, have taken the initiative in the introduction of their valuable medicine, which our leading practitioners are prescribing largely), by guaranteeing to the medical profession, that they will not in any way advertise the POWELL'S BEEF, COD LIVER OIL AND PEPSIN so that it will come under the head of a patent medicine.—*Exchange.*

The Atlanta Medical Register is the name of the successor of the *Atlanta Medical and Surgical Journal*. Dr. John Thad. Johnson and Dr. Jas. B. Baird succeed to the editorial management. The careful personal attention which these gentlemen will give to their new work, will make its standing superior to that of their predecessor. We wish the new Journal prosperity. The subscription has been reduced to \$2.50.

CURRENT LITERATURE.

“POST-PARTUM ATROPHY OF THE UTERUS.”

Dr. Walter Coles, of St. Louis, Mo., sends us a reprint on “Post Partum Atrophy of the Uterus.”

The author thinks that post-partum atrophy must be an exceedingly rare affection of the uterus, judging from the fact that writers have said little about it. It does occur though, and it involves painful and distressing consequences. He regards Simpson's theory of *sub-involution* and *super-involution* as unsatisfactory.

“To say that nature simply stops short of her function in the one case, or goes too far in the other, is an insufficient explanation of the pathology of these two very important affections. Already the science of gynecology has revealed many morbid elements which tend to result in sub-involution, other than the mere non-absorption of uterine tissue; such as insufficient contraction of the uterus after labor, whereby it retains an undue amount of blood in its tissues; congestion—the result of cellulitis, or peritonitis; retroversion or prolapsus; laceration of the cervix; premature getting up; inordinately tight-bandages, etc. And so too with so-called *super-involution*; we believe that when the history and nature of such cases are closely studied, the true etiology, instead of being due to excessive involution, will be found to depend upon a very different and distinct morbid process.”

“It is scarcely possible that a sudden obstruction to the blood supply of the uterus, by means of embolism, could prove so complete and permanent as to effectually starve the organ into reduced dimensions. Nor is it reasonable to suppose that the absorbents would develop such undue activity, without some special disintegrating factor being added to the normal *post partum* metamorphosis. If the atrophy were due to arterial obstruction, or to overstimulation of the absorbents, it would seem probable that as the patient emerged from the puerperal state, nature would gradually reassert her equilibrium, and there would be a natural tendency towards recovery. Such, however, is not the case. In *post-partum* atrophy of the uterus, the disability, as regards the amenorrhœa and shrinkage of the organ, is *permanent*, and, in the worst cases,

irremediable; nature is either indisposed or unable to repair the damages, while art accomplishes but little.

“Influenced by the teachings of analogy, and by the limited clinical experience at our command, we are constrained to believe that the etiological essence of this affection lies in the *preëxistence of inflammation of the uterine tissue*, whereby its cellular elements are partially destroyed and contracted. This is well illustrated in certain forms of inflammation of the testicle, whereby atrophy of the organ is produced. We are all familiar with the fact that inflammation may—according to circumstances—leave certain organs enlarged or attenuated; we may have *hyperplasia*, or *cicatrization*. Thus, under certain conditions, we may have inflammatory enlargement of the liver or the reverse. The same may be said of the kidney and testicle. Now, while we do not, of course contend that inflammation is at the bottom of every case of sub-involution, yet we do believe that in *all* instances of super-involution, and in *many* of the former, the pathology is precisely similar to that existing in the enlarged liver or testicle on the one hand, and in the atrophied organ on the other. They may represent simply different terminations of inflammation.

“The structure of the atrophied uterus is such as might be expected to result from inflammatory contraction; the tissues, according to Simpson, being *dense* and *fibrous*. This density we have had occasion to personally verify under the knife, and also to observe the marked paleness of the organ as compared with even the healthy virgin uterus.”

Dr. Coles gives a case in which he attempted to dilate the uterine canal, by three separate incisions during a period of eighteen months. Although the artificial canal made was dilated with tents, the openings gradually closed from the bottom, until it was reduced to the depth of an inch. During this time there was no indication or prospect of normal menstruation. The gentlemen who saw the case with Dr. Coles believed that it was one not only of atrophy, but of complete obliteration of the cavity of the uterus.

“Such a change we can only account for by imputing it to the same cause which pathologists recognize as producing similar results in other organs of the body, i. e., the effusion of highly organizable lymph, in sufficient quantity, to fill up the abundant

cellular interspaces between the uterine muscles, and adjacent to the numerous blood vessels and lymphatics which ramify in their structure, which lymph undergoes rapid *fibrous organization and contraction*. The result is an entire arrest of the physiological process by which, in the course of natural involution, new muscular elements take the place of those which have done their provisional work.

“That lymph of such a pure organizable character should be poured out in the midst of an organ in the peculiar physiological condition of a uterus undergoing rapid involution, with its tissues loaded with fat cells, and other elements of a retrograde metamorphosis, is certainly a remarkable phenomenon. Hence its infrequency ; but that it can occur under such unfavorable circumstances, is, I think, incontestably demonstrated in the case I have cited, in which, not only the body of the uterus underwent fibrous degeneration and atrophy, but the lining of its mucous cavity—contrary to the manner of mucous membrane in general, and necessarily laved with more or less detritus—actually became obliterated through adherence of its opposing surfaces. Viewed in this light, this case assumes a peculiar interest, not only in itself, but as pointing out the manner in which post-partum atrophy is brought about.”

Thomas on Diseases of Women.—A reviewer in the *Medical Times and Gazette*, July 30, is rather severe on Dr. Thomas' great work. He says : “The book gives good clinical pictures of disease. But he who follows out all its suggestions as to treatment will subject his patients to much unnecessary suffering, and himself, as well as them, to sore disappointment. If Dr. Thomas would ruthlessly expunge from his book every statement of which he has not himself examined the evidence, every recommendation as to the treatment which he has not himself treated and verified, and would insert, instead of general commendatory expressions, a summary of his experience with regard to doubtful modes of practice, he would make his work a safer guide.”

BRILLIANT PASSAGES FROM ADDRESSES DELIVERED BEFORE INTERNATIONAL MEDICAL CONGRESS.

SIR JAMES PAGET in his Presidential address says: It would be difficult to think of anything that seemed less likely to acquire practical utility than those researches of the few naturalists who, from Leeuwenhoeck to Ehrenberg, studied the most minute of living things, the Vibrionidæ. Men boasting themselves as practical might ask, "What good can come of it?" Time and scientific industry have answered, "This good: those researches have given a more true form to one of the most important practical doctrines of organic chemistry; they have introduced a great beneficial change in the most practical part of surgery; they are leading to one as great in the practice of medicine; they concern the highest interests of agriculture, and their power is not yet exhausted."

And as practical men were, in this instance, incompetent judges of the value of scientific facts, so were men of science at fault when they missed the discovery of anæsthetics. Year after year the influences of laughing gas and of ether were shown; the one fell to the level of the wonders displayed by itinerant lecturers, students made fun with the other; they were the merest practical men, men looking for nothing but what might be straightway useful, who made the great discovery which has borne fruit not only in the mitigation of suffering, but in a wide range of physiological science.

The history of science has many similar facts, and they may teach that any man will be both wise and dutiful if he will patiently and thoughtfully do the best he can in the field of work in which, whether by choice or chance, his lot is cast. There let him, at least, search for truth, reflect on it, and record it accurately; let him imitate that accuracy and completeness of which I think we may boast that we have in the descriptions of the human body, the highest instance yet attained in any branch of knowledge. Truth so recorded cannot remain barren.

We may read the history of the progress of truth in science as a palæontology. Many things which, as we look far back, appear, like errors, monstrous and uncouth creatures, were, in their time, good and useful, as good as possible. They were the lower and less perfect form of truth which, amid the floods and stifling atmos-

pheres of error, still survived ; and just as each successive condition of the organic world was necessary to the evolution of the next following higher state, so from these were slowly evolved the better forms of truth which we now hold.

And then, let us always remind ourselves of the nobility of our calling. I dare to claim for it, that among all the sciences, ours, in the pursuit and use of truth, offers the most complete and constant union of those three qualities which have the greatest charm for pure and active minds—novelty, utility, and charity. These three, which are sometimes in so lamentable disunion, as in the attractions of novelty without either utility or charity, are in our researches so combined that unless by force or wilful wrong, they hardly can be put asunder. And each of them is admirable in its kind. For in every search for truth we can not only exercise curiosity, and have the delight—the really elemental happiness—of watching the unveiling of a mystery, but, on the way to truth, if we look well round us, we shall see that we are passing among wonders more than the eye or mind can fully apprehend. And as one of the perfections of nature is that, in all her works, wonder is harmonized with utility, so is it with our science. In every truth attained there is utility either at hand or among the certainties of the future. And this utility is not selfish ; it is not in any degree correlative with money-making ; it may generally be estimated in the welfare of others better than in our own. Some of us may, indeed, make money and grow rich ; but many of those that minister even to the follies and vices of mankind can make much more money than we. In all things costly and vainglorious they would far surpass us if we would compete with them. We had better not compete where wealth is the highest evidence of success ; we can compete with the world in the nobler ambition of being counted among the learned and the good who strive to make the future better and happier than the past. And to this we shall attain if we will remind ourselves that, as in every pursuit of knowledge there is the charm of novelty, and in every attainment of truth, utility, so in every use of it there may be charity. I do not mean only the charity which is in hospitals or in the service of the poor, great as is the privilege of our calling in that we may be its chief ministers ; but that wider charity which is practised in a constant sympathy

and gentleness, in patience and self devotion. And it is surely fair to hold that, as in every search for knowledge we may strengthen our intellectual power, so in every practical employment of it we may, if we will, improve our moral nature ; we may obey the whole law of Christian love ; we may illustrate the highest induction of scientific philanthropy.

Let us, then, resolve to devote ourselves to the promotion of the whole science, art and charity of medicine. Let this resolve be to us as a vow of brotherhood ; and may God help us in our work.

PROFESSOR RUDOLPH VIRCHOW in his address on "THE VALUE OF PATHOLOGICAL EXPERIMENTS," says :

Even the worst opponents of vivisection recognizes Harvey's services. But, say they, since then, nothing more of importance has been accomplished by vivisection. They do not know that it is precisely that department of the doctrine of the process of the circulation which embraces the vital properties of the organs of circulation, which is entirely unmentioned by Harvey.

On what does the activity of the heart depend ? What influence do the vessels exert on the propulsion and distribution of the blood ? What share falls to the arteries, what to the veins, what to the capillaries ? All these questions are of the highest practical importance, and none of them can be investigated otherwise than by experiments on animals. But Harvey could not attack these questions, because in his time minute anatomy was not yet developed. Who knew anything of the nerves of the heart, or of the vessels ? Who had any notion as to the participation in the manifestations of the action of the heart and blood-vessels, on the part of the nerves, which supply the parietal structures, especially the fine muscles ?

An evil of two centuries again intervened, before Edward Weber, by experiment on the vagus nerve in a living animal, first revealed the mystery of the innervation of the heart ; and this, again, in a quite unexpected and unprecedented manner ; and before our now so much abused friend Claude Bernard likewise showed on a living animal the influence of the sympathetic nerve on the vessels of the head and neck.

SIR WM. GULL at the opening of the SECTION OF MEDICINE, says:

Some have prophesied that the advancement of the biological sciences will leave medicine a barren waste in their midst ; but such

a result, in the natural course of things, cannot happen. There is an indissoluble union between all the sciences, which for medicine especially, human interest will ever strengthen. The past history, and the present state of our profession, give us abundant assurance of this. It is not too much to assert that the study of medicine will for all time attract a large proportion of the best thinkers and workers of the world. It has ever been so; and what has been, doubtless shall be in the time to come. Besides, almost every germ of scientific thought has sprung in some way from medicine; and I have only to remind you that some of the most illustrious physiologists and pathologists of to-day, are members of our own profession. And if from the delicacy, intricacy and the demands made upon all the powers of the intellect by the extent and character of their investigations, they have as it were turned aside from immediate clinical work, they are still so much in union with us, that we daily at the bedside avail ourselves of the results of their labors, and gratefully acknowledge that they are our ministering angels, ascending and descending upon the ladder of science in the furtherance of all good practice.

MR. JOHN ERIC ERICHSEN, F. R. S., on the opening of the SECTION OF SURGERY, says :

Surgery is never stationary. To be stationary while all around is in movement would be practically to retrograde. But movement does not necessarily mean advance. The general direction of the movement may undoubtedly be forwards but the factors of that movement do not all equally tend to progress. When the history of surgery comes to be written—and this has never yet been done—it will be found that the surgery of the nineteenth century has not been uniform in its progress in all departments; that its advance has not been continuously in one line, but that its progress has been materially affected by the prevailing bias of the professional mind of the day. Anatomical at one time, physiological at another, the tendency of the surgery of the present day is influenced in one direction by the mechanical spirit of the age, and in another by the advanced pathology which is one of its chief medical characteristics. Yet the continuous advance of our art is undoubted. The gain that thus results has been definitely secured to surgery and to mankind. It can never be lost. Every conquest that has been

made has been permanent. Year after year some new position has been won, often, it is true, after a hot conflict of opinion; but once occupied it has never been abandoned. Thus our standpoint has ever been pushed on in advance. For knowledge in science is emulative, and skill in art is a tradition that is hereditarily transmitted from master to pupil, if not by the individual, yet by the profession to which he belongs, from which he has acquired, and to which he bequeaths it, augmented and perfected by his own labors. With the knowledge of our predecessors we are familiar; to its stores each generation has added. What they have done has been transmitted to us, and we can readily accomplish. In what we can do, we may be sure our successors will not fail.

DR. CHARLES WEST in his ADDRESS AT THE OPENING OF THE SECTION ON THE DISEASES OF CHILDREN, says :

And now, with your permission, I will conclude with an old apologue, which tells how, when the fabled Arabian bird renewed each hundred years its vigor and eternal youth, the birds of the air all helped to build its nest. The eagle and the wren contributed alike to this labor of love and duty; each brought what he could, nor ceased till the task was done. And surely science and art, especially our science and art, are old and new, renewing day by day, and burning by a voluntary self-cremation old theories, half facts, hasty conclusions, and substituting more accurate observations, truer inferences, more solid judgments. To this great end we may all do something; but, labor, as we may, our task will never be finished, for not once in a hundred years, as the fable runs, but every day and all day long, the process goes on—a daily death, a daily renewal, as in our bodies' growth, a death of error, a development of truth.

MR. JOHN SIMON in his address at the Opening of the SECTION IN PUBLIC MEDICINE, referring to the British "Cruelty to Animals Act," he says :

Consider for a moment what this means in regard of the members of our profession whom it affects. Contrast with it the almost unbounded trust with which the world, from time immemorial, has regarded the character of our profession. Consider the relation of inmost confidence in which members of our profession in every corner of the kingdom are admitted to share in the sanctities and ten-

derness of domestic life. Consider our immense daily responsibilities of human life and death. Consider that there is not a member of our profession to whom the law does not allow discretion that, in certain difficulties of child-birth, he shall judge whether he will kill the child to save the mother. And in contrast with all this, is it to be seriously maintained that society cannot trust us with dogs and cats? that our foremost workers—(for it is essentially they who are affected)—cannot be trusted to behave honestly towards their brute fellow-creatures, unless they be regulated and inspected under a special law in much the same preventive spirit as if they were prostitutes under the Contagious Diseases Act?

If there exist in the social organism any function whatsoever for which development and eventual triumph may be foretold, surely it is that of State Medicine. Of the two great factors concerned in it—the two strong powers which within our own time have converged to make it the reality which it is—the growth of science on the one hand, and the growing stress of common humanity on the other, neither one is likely to fail. Of our science it is needless to say that it will grow. To the science of Nature, indeed, is allotted that one incomparable human day which knows no sunset. In the pure light of its ever-present day-break, individual workers will pass away, generations will change, but the studies of Nature, and, above all, the gathering of such knowledge as can lessen man's physical difficulties and sufferings, will surely grow from age to age, and, as on Proserpina's sacred tree, one golden fruit will follow another: "*simili frondescet virga metallo.*" And no less also in the other direction, the auguries are wholly for our cause. Popular education is gradually making its way, and it will grow to be a force on our side. Masses of mankind that now have to be humbly pleaded for by others, will then be strong to speak for themselves. Physical interests, now but little understood, will then be within grasp of all men's apprehension. Not only will health be recognized, at its true value, and its elementary requirements be regarded, but also the frauds and villanies which are now committed against it will have become intelligible to the common mind; and the workman of the future will strike against being cheated in wages. As such times comes to the world, the science and the profession which care for man as man will get to be better

appreciated than now. And in proportion as an educated people grows to become Body-Politic, State Medicine will be seen to represent that true ideal of Government-action which sets its standard of success in the "greatest happiness of the greatest number."—*British Medical Journal*.

Medical Journal in Alabama.—The Medical Association of Alabama received a report at their last meeting in Montgomery in April, recommending the establishment of a medical journal on certain conditions. The report was signed by Drs. Geo. A. Ketchum, F. M. Peterson, Jerome Cochran, S. D. Seelye, and the committee continued. We wish them abundant success, and feel assured that a medical journal will develop the talent which abounds in Alabama and from our own experience in this State it will add greatly to the success of the State Medical Association of Alabama.

Octogenarian, Surgeon, and Poet.—Professor Ricord, now in his eighty-first year, has been suffering from an illness which gave reason for alarm, from which, however, he is rapidly recovering, and is, indeed, now convalescent. The *Figaro* published recently a long and flattering biographical sketch of M. Ricord, by a contributor who signs himself "Janus." The vigorous veteran addresses to the *Figaro* the following quatrain in thanks to the article of "Janus."

"Janus, le roi latin, de son double visage
A bien vu mon passé sillonné par l'orage,
Et le présent plus calme, et l'avenir plus doux.
Toujours très bienveillant and forever thank you."

Tattooing Arteries.—Dr. Yandell in a letter from London to the *American Practitioner* says that a French surgeon suggests that soldiers be tattooed over the points at which arteries are most effectually compressed, to enable them to serve themselves or their comrades when wounded until the assistance of a surgeon be procured.

QUEBRACHO IN DYSPNŒA.

Dr. Andrew H. Smith, Chairman of the Committee on Restoratives of the New York County Medical Society, (*New York Medical Journal and Obstetrical Review*) gives the results of investigations upon the action of quebracho. The history of the drug, its botany and introduction as a medicine, are reviewed, adding nothing to the very instructive account given in the *Therapeutic Gazette*, of some months ago.

Therapentists sometimes get a clew to the action of a remedy by its botanical relations. *Aspidosperma quebracho* belongs to the natural order Apocynaceæ. (Sub-order Eupocynæ). Most of the species possess a milky juice, which is sometimes bitter, and employed as a purgative, febrifuge or depurative; sometimes they are acrid and very poisonous; sometimes mild, scarcely bitter, and simply laxative. *Tunghinia*, the ordeal-tree of Madagascar is the most poisonous of plants, a seed no larger than an almond suffices to kill twenty people. Oleander wood is very poisonous. *Wrightia antidysenterica* is a valuable astringent and febrifuge. *Alstonia scholaris* is a powerful bitter tonic. We find no therapeutical analogy in any of the species of this order, although it must be remembered that comparatively few plants are investigated for their medicinal qualities.

The drug employed by the committee was prepared by Dr. Squibb, of Brooklyn, and Messrs. Parke, Davis & Co., of Detroit. Of the 32 cases covered by the report, 11 were spasmodic asthma, with or without emphysema and bronchitis. Of these, 9 were relieved. Two cases of mitral insufficiency, one of mitral stenosis, one of hypertrophy with dilatation were not relieved. Two cases of dyspnœa depending upon Bright's disease were relieved.

In one case of aortic aneurism the dyspnœa was relieved until near the close. In one case of tonsillitis the dyspnœa, partly nervous, was relieved. In one case of cancer of the lung dyspnœa was relieved.

“In fact that dyspnœa depending upon such a variety of causes may be relieved by quebracho points to the respiratory centre as the seat of its action. Apparently it blunts the sense of want of air, and thus mitigates the suffering from a deficient supply. But this

action is not necessarily only palliative. Exaggerated respiratory efforts are often in themselves an evil, not only on account of the muscular effort expended, but from the aspiration of blood into the thoracic viscera, which results especially when the dyspnœa is caused by narrowing of the air passages other than by solidification or compression of the lung. Hence in many cases an agent which will moderate the violence of the respiratory movements will not only lessen the distress of the sufferer, but will increase the chances of his recovery. That quebracho will often very promptly fulfill this indication there seems to be no room to doubt, while as yet there is no evidence that it is liable to produce unfavorable after-effects. The extremely disagreeable taste of the medicine and its tendency to produce nausea are, however, serious drawbacks to it by the mouth. As yet, we have no record of its employment by the rectum. If the active principle shall be isolated, so that it can be used hypodermically, a great advantage will have been obtained."

Starch Digestion in Infants.—"The Saliva of the Babe is Active on Starch."—*Foster's Physiology*, p. 557.—"A jelly-like substance having been found in the bowels of children examined after death, of those fed on farinaceous diet, iodine the characteristic blue, indicating it to be starch.

"This proves that starch is not digestible as such, and does not appear to find material in young infants for its conversion into digestible sugar.—*Routh on Infant Feeding*.

Zweifel says the amylolytic ferment in children is absent from the submaxillary, though present in the parotid saliva.—*Foster*, p. 557.

High Potency.—A new and original therapeutic idea has beset the brain of a Dr. Searle, (we get our information from the *Nation*, No. 840), on the value of coca. It is heralded as the "great preserver of life and health in future generations." "Had our army at Gettysburg," says Dr. Searle "been supplied with it, Lee and his troops need never have been allowed to recross the Potomac." We express our most humble thanks that this flash of therapeutic genius had not earlier burst upon the discoverer.

FRIENDS OF NORTH CAROLINA BOARD OF HEALTH, WHAT THINK YOU OF THIS PREDICAMENT ?

The returns of vital statistics from the various counties of the State, 310 lbs. have been received at the office of the Secretary. These all have to be tabulated in a report, imposing upon that officer enough clerical labor to fill up the greater part of the present year.

These statistics have a history. The State made provision for the preparation of the blanks up to the point of their distribution. An official decision at Raleigh excluded all the packages for those counties not reached by express line, these counties numbering nearly sixty. It was then suggested that as the necessary postage to distribute the remainder only amounted to \$100, the State Board of Health should advance the amount from its yearly riches of \$200, because it was believed that the Legislature would some day reimburse the treasurer ! Unfortunately for this suggestion, the funds of the Board were spent far in advance of this call for money, and the Treasurer of the Board was satisfied with a previous experience which cost him more than \$600, that advances even to the State were not safe.

The Board was not to be frustrated in its work by such a trivial thing as the lack of money, so they laid their case before the National Board of Health and by their timely assistance the huge task of distributing the Vital Statistic blanks was accomplished. Another obstacle here intervened. The slowness and infrequency of the mails caused such delays, that many counties only received their bundles after the tax-listing was completed.

We do not know how it may strike our readers, but we are satisfied that we are working in a cause that deserves a better fate. We are working single-handed to put on a substantial basis the machinery for collecting vital statistics, without which our Board of Health cannot make any head way, and our efforts are not appreciated.

Every doctor who reads this can help us in the matter by calling attention of the Senator and Representative from his county to the work of the Board, and for the information of these "pub. funcs.," a copy of the First Report of the Board will be sent to any member who expresses the slightest signs of interest. The Board does not

intend to be snubbed or put off any longer. They deserve the means to carry on the work of the State. If it is necessary to spend \$3,000 of the State's money for civilian "bumalish" to make a splurge at Yorktown, it should be considered important to spend money to collect observations on the social condition of our population, to educate the masses upon the universally neglected matters of health, and to keep a standing organization to repel possible epidemics.

The Poison of Zygadenus Paniculatus.—A partial report from the Government Chemist shows that the bulbs of *Zygadenus paniculatus*, Watson, have a glucosid to which their poisonous properties are attributed. Convulsions and speedy death follow the eating of the bulbs of this plant. No antidote is yet known for it.—*American Naturalist*, August, 1881.

This plant belongs to an order, Melanthaceæ, noted for a number of drastic, narcotic and poisonous species among which may be mentioned veratrum and colchicum. This species of *zygadenus* is unknown in the Atlantic section of the United States.

Death of Professor E. Lloyd Howard.—We grieve to have to announce the sudden death, by drowning, on the 5th inst., of this eminent physician, one of the most useful, able and influential members of the profession in this State. Want of space compels us to say no more of him at present, and to defer the publication of the obituary notice intended for this issue until our next.—*Maryland Medical Journal*.

Keith Abandons the Spray.—Dr. Keith stated that with it, after having a succession of eighty successful cases, he had five deaths in the next twenty-five cases; two from carbolic-poisoning, one from septicæmia, and two from acute nephritis. On account of this mortality, and of the very frequent high temperature the evening after the operation, he had abandoned the spray in all operations, and had only had one death out of twenty-seven ovariectomies without the antiseptic treatment.—*Proceedings International Medical Congress.*—*Maryland Medical Journal*.

DEATH OF PRESIDENT GARFIELD.

The daily press has so industriously striven to give the account of the President's case, that we have refrained from offering our readers any opinions of our own or others, until something reliable could be written.

The acrimonious criticisms which have been aimed at the physicians in attendance, seem to have issued from those important persons who were aggrieved in being left out of the case.

We will, no doubt, ere long, have a full and correct professional account from the pen of the surgeons in charge, and this will set at rest the notorious surgeons who have been analyzing for the daily papers, so minutely, a case they never saw.

We copy from the telegrams of the Associated Press from the *Morning Star*, the following short account from the autopsy, signed by the surgeons present.

“It was found that the ball, after fracturing the right eleventh rib, had passed through the spinal column in front of the spinal canal, fracturing the body of the first lumbar vertebra, driving a number of small fragments of bone into the adjacent soft parts, and lodging below the pancreas, about two inches and a half to the left of the spine and behind the peritoneum, where it became encysted.

“The immediate cause of death was secondary hemorrhage from one of the mesenteric arteries adjoining the track of the ball, the blood rupturing the peritoneum and nearly a pint escaping into the abdominal cavity. This hemorrhage is believed to have been the cause of the severe pain in the lower part of the chest complained of just before death. An abscess cavity, six inches by four in dimensions, was found in the vicinity of the gall bladder, between the liver and the transverse colon, which were strongly adherent. It did not involve the substance of the liver, and no communication was found between it and the wound. Also the suppurating channel extended from the external wound, between the loin and muscles and the right kidney almost to the right groin. This channel, now known to be due to the borrowing of pus from the wound, was supposed, during life, to have been the track of the ball. On examination of the organs of the chest, evidences of

severe bronchitis were found on both sides, with bronchial pneumonia of the lower portions of his right lung, though to a much less extent on the left. The lungs contain no abscesses, and the heart no clots. The liver was enlarged and fatty, but free from abscesses, nor were any found in any other organ except the left kidney, which contained near its surface a small abscess about one-third of an inch in diameter.

"In revising the history of the case, in connection with the autopsy, it is quite evident that the different suppurating surfaces and especially the fractured spongy tissue of the vertebra furnish a sufficient explanation of the septic conditions which existed."

From our present knowledge of the case death seemed to have been inevitable from the first, and the wonder is that the illustrious sufferer lingered so long.

No nation ever sympathized more deeply with a ruler than have the people of these United States for President Garfield, and no men ever worked more assiduously and anxiously, or with more pains-taking than the medical men who attended him.

We confess medicine is not an exact science, as this case abundantly proves, nor do we pretend it is. But we trust that our brethren of the legal fraternity, who are so much given in their orations to berate medicine for its uncertainty, will see to it, that in this case at least, the great degree of certainty they claim for the law may be verified, and that justice be done the murderer.

BOOKS AND PAMPHLETS RECEIVED.

Third Annual Report of the State Board of Health of Kentucky. 1881. Pp. 104.

Human and Animal Variolæ. A Study in Comparative Pathology. By George Fleming, F. R. C. V. S. London: Baillière, Tindall & Cox. 1881. Pp. 65.

A Supplement to the Dictionary of the English Language of the XII, XIII, XIV, and XV Centuries. Third Edition. By Francis Henry Stratmann. Krefield. 1881. 4to. Pp. 94.

The Mother's Guide in the Management and Feeding of Infants. By John M. Keating, M. D. Philadelphia: H. C. Lea's Son & Co. 1881. 12mo. Pp. 118.

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By Samuel W. Gross, A. M., M. D. Sixteen Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1881. Svo. Pp. 174.

A System of Surgery, Theoretical and Practical, In Treatises by Various Authors. Edited by T. HOLMES, M. A., Cantab., First American, from Second English Edition, Thoroughly Revised and Much Enlarged. By John H. Packard, A. M., M. D. In Three Volumes with Many Illustrations. Vol. I. Philadelphia: Henry C. Lea's Son & Co. 1881. Pp. 1007.

Indigestion and Biliousness and Gout in its Protean Aspects. By J. Milner Fothergill, M. D. New York: William Wood & Co. 1881. Pp. 320.

The Wilderness Cure. By Marc Cook. New York: William Wood & Co. 1881. Pp. 153.

Transactions of the College of Physicians of Philadelphia. Third Series. Vol. 5. 1881. Pp. cxi—124. Lindsay & Blakiston for the College of Physicians.

The Prescriber's Memoranda. New York: Wm. Wood & Co. 1881. Pp. 301.

Transactions of the Medical Association of the State of Alabama. The Report of the State Board of Health. Thirty-Fourth Session. 1881. Montgomery, April 12 to 15th, 1881. Montgomery, Ala. 1881. Pp. 568.

Uterine Dilatation with a New Instrument. By H. P. C. Wilson, M. D. Reprint American Journal of Obstetrics. Pp. 9.

Martin's Chemists and Druggists Bulletin. A trade journal devoted to Pharmacy, Medicine and Kindred Interests. New York: Sent free to any physician or surgeon sending name.

Minutes of the State Medical Society of Arkansas at its Sixth Annual Session. Little Rock: 1881. Pp. 48.

Transactions of the South Carolina Medical Association. Thirty-First Annual Session held in Newberry, S. C., April 19th to 21st, 1881. Charleston, S. C.: Edward Perry. 1881. Pp. 127.

Amblyopic Affections. Their Value in General Practice. By Charles W. Hickman, M. D. Augusta, Ga. Reprint. Pp. 8.

First Annual Report of the State Board of Health of New York. Albany: Weed, Parsons & Co. 1881. Pp. 205.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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ORIGINAL COMMUNICATIONS.

REPORT OF THE CHAIRMAN OF THE SECTION OF PA- THOLOGY AND MICROSCOPY.

Read before the Medical Society of North Carolina at Asheville,
N. C., June 2d, 1881.

By HUBERT HAYWOOD, M. D., Raleigh, N. C.

The Chairmanship of the Section of Pathology and Microscopy, with which your partiality has honored me, is beset with many difficulties, owing to the wide range in the undeveloped field of these two branches, which more or less go hand in hand, for theory and speculation and owing to the imaginative eye of the microscopist. Such being the case it is indeed hard to separate truth from fancy and real visible objects from those mere creatures of the eye of the imagination or better—the microscopist. I must, therefore, beg your indulgence for a few moments, while I present for your consideration the following results of my studies in the last year's work of pathology and microscopy, which I hope will meet with your approbation :

Dr. Joseph Coats in the Medico-Chirurgical Society of London,

reports on the pathology of tetanus and hydrophobia as follows. As regards hydrophobia—in the central nervous system, the salivary gland and the kidneys, there were distinctive signs of irritation and the direct connection of these signs with the blood vessels is exceedingly suggestive of the existence of some irritant in the blood, which has acted on the vessels primarily. In tetanus there are appearances strongly suggestive of irritation, and of irritation acting out from the blood vessels. In both, the lesions occur around the larger and medium sized vessels of the cord, around the vessels of the medulla oblongata in a high degree and in the convolutions to a slight extent. In tetanus the other organs have not been examined. In regard to the symptoms in these two diseases few will deny that in hydrophobia they are related to some poison circulating in the blood and attacking specially the central nervous system. In tetanus this view, though supported by very high authority, is not generally received. Looking, however, to the fact that on the one hand the symptoms in both diseases have a closely analogous anatomical distribution, it seems very natural to suppose that in tetanus also, there may be some poison circulating in the blood and causing disturbance. It may be stated also that the high temperatures observed in tetanus—sometimes reaching a startling elevation—are more suggestive of a general disease, these temperatures not bearing any constant relation to the exaggerated muscular contraction.

THE PATHOLOGY OF CHRONIC ANÆMIA.

Mr. Theo. Deecke, in an article on the “Excretion of Urea and Phosphoric Acid in Anæmia,” reaches the following conclusions in regard to the general change of matter in anæmia, as far as its amount is indicated by the amount of urea and phosphoric acid eliminated through the kidneys:

1. In primary chronic anæmia there is a remarkable decrease in the amount of urea and phosphoric acid in the urine, which indicates grave disturbances in the nutrition of the tissues and a diminution of the general change of matter in the system.

2. The diminution in the general change of matter reaches its lowest point in chronic anæmia with dementia, and next to this, in cases connected with subacute mania with a tendency to dementia.

3. The condition of morbid mental excitement in primary

chronic anæmia is coëxistent with a decrease in the general change of matter and seems to a certain degree to impede the processes of water and repair.

4. In cases of anæmia of a more acute character with a favorable physical and mental prognosis, there is a remarkable increase in the general change of matter during rest.

5. In the case of acute anæmia the amount of the general change of matter was not affected by the considerable loss of blood.

6. Secondary anæmia is combined with a morbid increase in the general change of matter at the cost of the tissues of the body.

7. In regard to the treatment of anæmia—rest, bodily and mental, are of great therapeutic value.

Dr. D. J. Hamilton in the *Practitioner* on “Bronchiectasy as a Complication of Bronchitis,” gives the following factors, which may be instrumental in producing bronchial dilatation :

1. The traction of cicatricial tissue on the walls of the bronchi.
2. Forced expiratory efforts.
3. Inspiratory pressure, when there is extensive collapse elsewhere.
4. Accumulation of catarrhal products within a terminal bronchus.

In the *Archives of Medicine*, Dr. J. C. Davis reaches the following conclusions on the formation of hepatic abscess :

1. The inflammation invariably starts in the interstitial connective tissue of the liver and secondarily involves a varying amount and number of the lobules of the liver.

2. Both the connective tissue with its blood vessels and the epithelia of the lobules through an increase of the living matter become transformed into embryonal or medullary elements, thus constituting what is termed the inflammatory infiltration.

3. The medullary elements, originally connected with each other by means of delicate thorns, in turn, become isolated by rupture of these thorns and now being suspended in a serous fluid, represent pus corpuscles—the sum total of which is called an abscess.

4. The pus corpuscles, therefore, are a direct offspring of the liver tissue, both connective and epithelial and no indication could be seen of an emigration of colorless blood corpuscles, which latter may be assumed, but by no means could be directly proved.

5. On the boundary of the abscess the inflammatory tissue is transformed into a homogeneous or striated connective tissue, building a wall around the abscess. In the formation of this also, the peritoneum shares, if the abscess had formed near it.

6. Through my studies the doctrine of C. Heitzmann, of plastic and suppurative inflammation has been satisfactorily corroborated. As long as the indifferent elements remain united with each other they represent a tissue and are ready at any time to produce a basis substance, viz. : new connective tissue. On the contrary, if the indifferent elements are broken apart, they become pus corpuscles, arisen from all constituent elements of the inflamed tissue itself.

It may be interesting to state that Dr. Ludwig Pfleger reports on the "Cerebral Pathology of Epilepsy" that in about one half of the necropsies on insane epileptics a lesion—either sclerosis or atrophy—of one or both hippocampi may be observed and that the great majority of instances of lesion of the hippocampi occur in those in whom the fits are frequent and severe. As it appears from anatomical and experimental research that the cornu ammonis has no connection with the motor functions, it cannot, therefore be maintained, that the morbid change in it is either the cause, seat, or result of the epilepsy. The doctor attributes the lesion to a disturbance of nutrition dependent upon a change in the mode of circulation of the blood during and after the epileptic attack, owing to the peculiar distribution of the blood vessels of the hippocampus.

M. Laffont on the "Pathology of Glycosuria" concludes that glycosuria results from the stimulation of the central extremities of the pneumogastric nerves, the depressor nerves and the sensory nerves generally, and in the result of an impression conveyed to the bulbar vaso-dilator centre, the path from which is by the cervical cord, the first dorsal nerve roots and the sympathetic and splanchnic nerves. It is conjectured to be by an action upon this centre, that certain cardiac and general diseases may cause glycosuria. These effects and those of the diabetic puncture are prevented by the separation of the upper dorsal nerve roots, while the effect of stimulation of these divided roots shows that they contain dilator nerves for the vessels of the abdominal viscera.

Drs. Damaschino and Roger state the following facts in regard to the "Pathology of Spinal Paralysis in Children :"

1. The anatomical lesions are situated in the motor regions of the spinal cord.

2. They consist of a central myelitis with a stadium of softening and atrophic destruction of the cells of the gray substance together with sclerosis of the lateral columns and considerable of the anterior roots and the nerves leading to the paralyzed muscles.

3. The atrophy of the cells is not—as Charcot is of opinion—the whole process, as it is in progressive muscular atrophy.

4. The opinion of Leyden that there is a circumscribed and a diffuse myelitis in children is worthy of consideration.

5. It remains for future examination to decide whether the myelitis begins as interstitial or parenchymatous—in the cellular tissue or the nerve cells.

It may be well to state that Dr. Webb has proven that we must in future recognize intestinal polypi as among the possible causes producing intussusception.

MICROSCOPY.

Dr. J. Bermann in the *Archives of Medicine* gives “Some Points on Staining in Toto and Dry Section Cutting,” which are of so much practical use, that I shall give them for the benefit of those, who may be interested in the subject, or as the doc or says: “For the benefit of those medical men, who wish to consider the study of pathological microscopy, as it enables them to work whenever they find leisure and to leave off at any stage of the proceedings, without fear of spoiling what is unfinished.” For hardening the tissues, with scarcely an exception, Muller’s fluid (containing $2\frac{1}{2}$ parts of bichromate of potash, 1 to $1\frac{1}{2}$ parts sulphate of soda and 100 parts distilled water) is to be preferred, because it hardens the tissues without shrinkage, and almost preserves their natural appearance. It may not be amiss here to mention that it can be satisfactorily employed only when the following rules are strictly observed :

1. The greater the quantity of fluid, within certain proportions to the size of the specimen to be hardened, the more confidently one may count upon its success.

2. The fresher the specimen, the more accurate and reliable will be the definition of the cellular construction of the sections—specimens not prepared after the fashion will under no circumstances repay the labor and trouble expended upon them.

Besides slightly staining the tissue, Muller's fluid has the advantage of preserving the blood corpuscles in the blood vessels better than other hardening agents, but to attain this end the fluid, which is perfectly transparent, should not be allowed to lose its transparency and must be very frequently changed—not less than twice on the first day, and then (according to the quantity of the fluid) at least every other day. A small piece—say half a cubic inch—requires about a week to attain the right consistency, when, after first washing it in water, it is transferred into alcohol of about 75 per cent. It is not absolutely necessary to harden the specimen, in Muller's fluid first; those put only in alcohol in the beginning will stain just as well. I prefer to use Muller's fluid, because most tissues shrink in alcohol unequally and thus are apt to spoil the right proportion of the specimen.

To insure perfect success in staining it in toto (one of the principal advantages of the method) the alcohol must be changed as often as it becomes yellow, for the specimen is not ready for staining, until the alcohol remains perfectly colorless. The specimen is then removed to the staining fluid, which is as follows: Dissolve five grammes of best carmine in about eight grammes of caustic ammonia, then add distilled water until its contents equal 100 cubic centimetres. After equal parts of absolute alcohol and glycerine are added to it, it is put on the hot water bath and kept there, until the prevailing odor of the ammonia has almost disappeared, which is usually accomplished in about two hours. When properly made, no sediment will be deposited. The fluid is now ready for use and has this great advantage over other carmine solutions, that it can be used over and over again and at the same time acts as a preserving fluid, so that the specimen can be left in it for an unlimited time. It never stains too deep a shade and makes the nuclei come out very sharp. For the examination of glands, where it brings out the lunulæ most perfectly and also of nervous matter, it cannot be surpassed. The disagreeable quality of carmine—to stain well one day and diffuse the next—is thereby entirely obviated. Another staining fluid, with which you can obtain beautiful results either in combination with the first for double staining or by itself alone, is that prepared with hæmatoxyline. It is especially to be recommended for pathological specimens, because the hæmatoxy-

line has a peculiar affinity to the products of inflammation and cells of pathological origin. To prepare this fluid mix Bœhmer's hæmatoxyline with equal volume parts of absolute alcohol and glycerine. Thus mixed it forms the solution for staining *in toto*. It does not stain so quickly as the carmine solution and pieces of the above mentioned size must remain in it from three to four weeks, when they are taken out and again put into alcohol to harden.

Specimens stained in the carmine solution alone are taken out and to remove the superfluous carmine, are washed in distilled water for a few hours, then put into weak alcohol to be changed for stronger, until no more of the pink coloring matter is drawn from the specimens; then to extract all water from the tissue it is transferred into absolute alcohol, which must be changed several times. When this end has been accomplished, it is put into spirits of turpentine, also to be removed twice at least for large pieces. It is then placed in a saturated solution of paraffin in spirits of turpentine, where it is again left for several days—the time varying with the size of the specimen. Next, it is removed and laid on filtering paper, that the the turpentine may evaporate; the paraffin remains and fills the crevices, blood and lymph vessels, &c. When sufficiently dry, it is embedded in a mixture of paraffin and mutton suet—the proportions of which vary with the seasons. In summer, pure paraffin will be found necessary. The paraffin should always be heated on a water bath and it will be found very convenient to throw the piece to be embedded into the hot fluid mixture, so that it gets thoroughly soaked and when cooled off, forms an inseparable mass of equal consistence with the paraffin. You will never find any tissue, not even embryonical, to spoil by exposing it to a moderate heat, while in the fluid paraffin.

It is then ready to be cut dry, and can be preserved in this state any number of years.

For cutting, it is best to employ a sledge microtome, made by Hærtel, in Breslau, after designs by Dr. Long, which enables you to make very long sections of equal thickness—from 1-100th of a millimetre upwards. When properly constructed, it is the most perfect instrument of its kind known and the cost of it with two knives and a case is in Germany, at the makers, 75 marks, equal to about \$19. The section thus cut is transferred to a slide, where

it frequently has to be unrolled, the only drawback to the method, as it requires some dexterity of manipulation. To dissolve the paraffin remaining around and in the section a few drops of solution of creosote and turpentine (in the proportion of one to four) are added, and when this has been removed from the glass by wiping or by drawing it up with filtering paper, it is enclosed in either Damar varnish or Canada balsam.

It happens pretty frequently that the specimen, when in the paraffin, is found not to adhere to it. In that case throw the whole piece back into the hot paraffin and suet mixture and embed it then anew. By this manipulation you get rid of the superfluous turpentine, which was the cause of your former poor success.

By following this method to the letter it will be certain to reward any colaborers in microscopical research and they will obtain especially fine specimens by staining first in the carmine and then the hæmatoxyline solutions. These double stained specimens enable us to differentiate the individual cells, which take the carmine solution up with equal intensity. As a matter, of course, the specimen stained in carmine has first to be washed out and hardened in alcohol, before it is subjected to the hæmatoxyline solution. For instance, the neuroglia cells of the spine and brain, cancer cells and other pathological products are brought out with greater clearness. Objects thus stained in toto can be preserved in alcohol for an unlimited time and can also be embedded for cutting in any other manner according to the fancy of the worker.

Mr. Heneage Gibbes in the *Quarterly Journal of Microscopical Science*, of London, had this to say in regard to the use of the Wenham Binocular with high powers. A great many plans have been tried for the purpose of obtaining stereoscopic effect with high powers and these have all required a special stand, or special apparatus entirely removed out of the reach of the ordinary working microscopist and this led, I think, to the prevalent idea that the binocular microscope is entirely unsuited for histological or pathological research. With a 1-12th oil immersion of Messrs. Powell & Lealand's make, attached to a Wenham Binocular the stereoscopic effect is perfect, the whole field is illuminated and the result obtained is really wonderful. Taking a preparation of the tadpole's tail hardened in gold solution the different elements are seen in

their true relations to each other ; there is no difficulty in deciding whether a fine nerve termination passes over or under or into a connective tissue corpuscle. Cells are seen not as flat plates, but as spheroidal bodies, with their intranuclear and intracellular network pervading their whole substance. The only difficulty I have found is to persuade people that the power is really so high, objects stand out in such bold relief, they cannot believe it possible. This, therefore, is a most important improvement.

Mr. Heneage Gibbes in the *Quarterly Journal of Microscopical Science*, of London, writes as follows on the "Structure of the Spermatozoon :

I have examined a number of specimens of the human spermatozoa, some taken from the testes twenty-four hours after death by accident, others from twelve to twenty-four hours after coition ; these came by post and I could detect no material difference in their structure, with the exception of the varying lengths of the tails in different specimens. I think something may be made of this, if one could only get sufficient data to go upon. In all I found a long, very fine filament, which required great care in the illumination to show it properly, as when after a good deal of trouble it was shown well with the 1-25th immersion, I found I could readily see it with the 1-15th oil and even the 1-12th oil immersion. The filament is very fine and is connected to the tail by a membrane, which is much wider than in the amphibia and allows it to move further from the tail ; it is also longer than in the amphibia and is more folded in consequence. The mere fact of this discovery is pointed out by the author. I suppose its significance will be determined by future investigation.

Attention should be called to the fact, that Ranvier has established the extremely important and unexpected fact, as far as the muscular coat of the sweat glands is concerned, that muscular tissue in the mammalia is developed from epiblast.

Prof. Pouchet, of Paris, writes an article full of close research on the much discussed origin of the "Red Blood Corpuscles." After treating the lymphatic glands, the spleen, the marrow of bones, the lymphoid patches in the mesentery, to which he says observers have tried to relegate this so-called hæmatopoietic function and giving most excellent reasons for his non-belief in these theories, he

remarks there are yet left the supra-renal capsules and thymus, and asks the question, Do they deserve also to be studied from the same point of view? From this most interesting article, we draw the following conclusions: It must be admitted that the origin of the red blood corpuscles among adult mammals has not yet been completely made out. Anatomists are divided between two principal theories, some with Neumann and Bizzozero distinctly attribute to the red marrow this function in the economy—the production of the hæmatids or red corpuscles and the provision for the normal regeneration of the elements of the blood after accidental losses. Prof. Pouchet thinks on the contrary with Hayem that the hæmatids or red blood corpuscles originate from the globulets of Donne—only they differ as to the origin of these globulets. Whilst Hayem looks upon them as the endogenous product of cells which are as yet unknown, it seems to Prof. Pouchet that everything goes to prove that they are formed in the blood plasma whilst in circulation in a way which is more or less analogous to the formation of the filament of fibrin in blood which has been drawn from the vessels.

I cannot close without calling attention to articles which will well repay the reader, both because they are full of scientific interest and because they are most complete and comprehensive, but which are too long to be embraced in a report of this kind on observations in Comparative Pathology by Sir James Paget in the *Lancet*, and on the Structure and Homologies of the Germinal Layers of the Embryo, by F. M. Balfour in the *Microscopical Journal* of London.

If I have succeeded in the foregoing pages in interesting you or imparting any unknown information I shall esteem myself most fortunate.

Zoedone.—The English chemists have been at work to make “temperance” beverages, and a liquid called *zoedone* is one of the results. The formula for it is given in the *Boston Journal of Chemistry* as follows:

Calcii phosphas, grs. 2½.
 Ferri phosphas, gr. 1.
 Potassii phosphas, gr. 1-5th.
 Iodii phosphas, gr. 1-12th.

The above ingredients to each small champagne-bottle.

CASES OF PREVENTABLE DISEASES OCCURRING IN ONE HOUSEHOLD.

Read before the North Carolina Medical Society at Asheville,
June 2d, 1881.

By R. F. LEWIS, M. D., Lumberton, N. C.

On the 25th of February last I was called to see George, a boy five years old, whom I found crying with pain in both ears. His tongue coated and with some fever. The next day he had increased fever and some enlargement of the lymphatic glands, especially those behind the angle of the lower jaw. The third day there was a further increased temperature of the body, and that afternoon, I noticed the appearance of a suspicious eruption on different portions of the body, which became more diffused, and two days afterwards, the whole surface was covered with an exthema resembling a boiled lobster. About the seventh or eighth day the fever began to subside, the eruption to disappear, and the desquamated stage came on. The enlarged and tender glands became smaller and the ears were discharging profusely, a white thin matter, of a very disagreeable odor. The interior throat up to this time, showed no further trouble than the characteristic inflammation and eruption of a rather exaggerated case of *scarlatina simple x*. For some days now, the little fellow seemed to be doing as well as could be expected. One morning my attention was called to the fact that he had great trouble in swallowing and upon examining the throat I found it filled with a thick yellow exudation and the nares was closed with a similar secretion. This had to be removed from the mouth and throat very often, that he might swallow and get enough air into the lungs to carry on respiration. This condition lasted about two days, and in the place of this exuded lymph, the whole internal throat was covered with an unmistakable *diphtheritic membrane*, and the child was unable to swallow anything. He seemed very thirsty and often tried to drink water. Febrile symptoms again came on. The glands again enlarged, and the ears, that had nearly ceased running, began again to discharge freely. Several days now elapsed with little change in his condition, for the better at least, when on the twentieth day of his sickness, the membrane came away. He began swallow-

ing fluids and his appetite became ravenous. His convalescence was slow and some weeks passed before he could walk without assistance. During this time there were five other well marked cases of diphtheria occurring with adults who had nursed this child,—most of them quite severe and lasting from four to eight days, and three suffered with fever, sore throat, and general malaise,—undoubtedly the effects of a blood poisoning. In fact, every member of the household up to this time, had suffered more or less, but, a gentleman fifty-four years of age, who only looked in occasionally to see how the others were getting on, and a bright little girl of two years of age, whom we isolated as much as possible. I, as well as the family were anxious for her. We expected every day when Maggie would be taken sick, and I treated her almost as if she was really so. All the others had gotten well or nearly so. I had ceased my professional visits, and we were pleased with the belief that little Maggie had escaped entirely, when my attention was called to the condition of one of her eyes, which I found inflamed and somewhat swollen. The second day after this was noticed, she had considerable fever with enlargement of the glands of the face and neck; the following day the eruption made its appearance, and in a little while the whole surface of the body was thickly covered with the efflorescence, the glands and eye were more swollen and tender, and an abscess threatened one of the glands.

The efflorescence began to disappear on the seventh or eighth day. An offensive discharge took place from the ears and the affected eye, and convalescence came on very rapidly. The discharge continuing for several days after the child was able to play about the house.

On the 16th of May, nearly three months after the occurrence of the first case, Mr. F., the father of the two children, was taken sick. He was of the number who seemed to suffer from the effects of a blood poisoning, but had apparently recovered entirely from its effects. His disease rapidly assumed a typhoid character, and at this writing, May 28th, he is quite sick with this fever.

These cases have occurred in one household in the commodious and desirable residence of Mr. B. Godwin in the town of Lumberton. The dwelling is located in an elevated part of the town, and the neighborhood is quite a healthy one. The building is new and in thorough repair. The sanitary condition of the whole premises

seems to be perfect in every respect. I am satisfied that there is some local cause for this trouble, and I can find nothing even suspicious, but the condition of their drinking water. There is something quite unpleasant about the taste of this water to those unaccustomed to its use. The well stands about forty yards from the horse lot, and the water used by the stock is carried by means of an iron pipe, to a large trough standing in this yard. For a number of years quite a number of horses and mules have been kept in this enclosure, the surface of which has been kept well covered with pine straw and other litter. Of course there has been a continued moisture underneath; this straw, from rainfall, and a constant dripping from this large trough. Once a year at least, this manure has been taken away, and in doing so no doubt the top surface, and the hard pan as it is called by some, has been broken into. Is it not highly probable that this liquid manure has percolated into the earth, and in this way contaminated the water of the well. Soon after the first cases occurred my suspicions led me to believe this was the cause of the sickness, and on the 24th of March I forwarded by express to Professor Charles W. Dabney, a sample of this water, stated my reasons for doing so, and requested an analysis of it at his earliest convenience. His reply on the 28th, was: "We will give the matter our attention at the earliest moment possible. The Station is at present very fully occupied with the analysis of fertilizers, but we hope to complete them in a few weeks."

Again, I wrote to Prof. Dabney about the first of May, calling his attention to the promised analysis, and on the 10th of May he wrote me that: "The analysis of your sample of water was delayed some time, by the press of the fertilizer work, which is given precedence by law." * * * *

It strikes me that this is a very great mistake in the law! For what is of more importance than the general health especially in this instance? For the fertilizers to be used in this year's crop, have already been applied, and the commercial value per ton demanded by manufacturers, and the real value thereof to the farmer, will be more clearly determined by him, when he gathers his crop this fall, than by any figures the professor can furnish him now. In this view of the matter, it is not unreasonable to ask why the delay? More than two months ago the suspected water was sent, and I have

no analysis yet. If this had been received in a reasonable time, and had the analysis shown, that the water was contaminated, it should have condemned the well and probably prevented the occurrence of the last mentioned case—that of typhoid fever; and as this case has not yet run its regular course, who can say when, and where the trouble will end?

It appears from these cases, that scarlatina and diphtheria, if not allied diseases, may be produced by the same local poison, and I must attribute the typhoid fever case to the same cause. The first mentioned case was a well-marked case of scarlatina, with diphtheria supervening. The adults suffered exclusively with diphtheria; and the little girl, seems to have had only scarlatina, unless the beginning was diphtheritic conjunctivitis.

In the treatment of all of these cases I have nothing new to offer. I followed the beaten track: Quinia, chlorate of potash, and the muriated tincture of iron, with the all important aliments were relied upon. With the first child as soon as he was unable to swallow, the syringe was resorted to, and he was fed *per enema*, at least every three hours, and to this alimentation the child undoubtedly owes his life to-day. I look upon this manner of nourishing patients suffering from any of the exhausting diseases, when the stomach, from any cause, is unable to perform its proper functions, as of the greatest importance. In diphtheria the stomach is often implicated in the latter stages of the disease; and I believe, that if the syringe was carefully and unsparingly used then, that the mortality from this dreaded pestilence would be greatly lessened. The prophylactic treatment pursued in the little girl's case I am fully satisfied went a long ways in ameliorating the severity of the disease.

Just as I had finished the above report, the long looked-for analysis came to hand under date of May 25th, and I give it below:

“Total solids, in solution, 58.90 grains per gallon.

Chlorine, 17.85 grains per gallon.

Free ammonia, .04 parts per million.

Albuminoid ammonia .03 parts per million.

NOTE.—Large amount of common salt.”

In his letter accompanying report, Prof. Dabney says: “The large amount of salt is the only unfavorable point about this water.

If the free ammonia were larger, I would suspect large amount of animal contamination."

It will be recollected that this water was taken from the well two months before the examination was made. Is it not highly probable that the free ammonia, of which there is so small a per cent. as shown by the analysis, made its escape?

CASES ILLUSTRATING THE IMPORTANCE OF CAREFULLY INVESTIGATING ORDINARY EAR TROUBLES.

Read before the North Carolina Medical Society, held at Asheville,
June 2d, 1881.

By T. W. HARRIS, M. D., Chapel Hill, N. C.

I ask the privilege of reporting to the State Medical Society two cases, which being out of the usual, every day experience of the general practitioner, appear to me to possess unusual interest. The two cases were separated by several years, but possessed some points in common.

The first case was that of a child some three years of age. The family had been living for several weeks at a distance, and sent for me, telling me the child had bilious fever. I found, indeed, high fever and a very fetid discharge from the ear, which had existed for a long time—several weeks. They did not attach much importance to the ear trouble, but had syringed it with warm or cold water, sometimes with carbolic soap added, as they thought best. Careful inquiry failed to discover any evidence of malarial infection, in the neighborhood in which they had been living, or in the history of the case, up to that time. I gave one or two doses of quinine,—partly for treatment, partly for diagnosis. (I say 'one or two,' because, not taking any notes of the case, I cannot now remember the details of treatment.)

I soon came to the conclusion that the ear was the source of the whole trouble. The child grew rapidly worse, in a short time, relapsing into a semi-conscious state. This was soon followed by

paralysis of one half of the body, on the side opposite the diseased ear. On the other side there were paralysis of the third nerve, in part, as evidenced by dropping of the lid and dilatation of the pupil. There were some convulsions. Death soon terminated the scene.

The lesson to be drawn from this case is, in my opinion, this :

Ear affections, accompanied with a purulent, offensive discharge, may be dangerous. Such discharge indicates inflammation in the middle of internal ear, and the road to the base of the brain is very short. I think there is little room to doubt that, in this case the inflammatory process, which started in "Catarrh of the Ear," ended in an affection of the brain and meninges. I do not believe these cases are very rare. I fear they are sometimes overlooked until it is too late.

The other case was that of a young man. In attempting to jump from a train in motion he fell so violently that he remained unconscious for some time, and it was a month before he was able to go about. One side of the head remain very sensitive to noises, jars or shocks of any kind, and he frequently had spells of pain in the head, and in the ear of one, the injured side.

When I saw him, for the first time, more than a year after the fall, he was complaining of slight pain in the head, resulting from "cold in the head," which he said always had this result, since the accident. He was attending to his ordinary, daily work, and seemed not seriously sick. The next day he sent for me. I found him suffering from violent earache and pain in the head. He had no fever. I had the ear kept filled with warm water, and gave a dose of morphia. The next day the pain in the head returned, but no earache. I gave a mild purgative and morphia hypodermically. He was again relieved, but during the latter part of the following night he was again attacked with pain, followed by fever and delirium of a violent sort. Fever and delirium grew worse, and during the following night he fell into a semi-comatose condition, which terminated in death about twenty-four hours later.

On the first appearance of the delirium and fever, I thought I had to deal with inflammation of the base of the brain and meninges, and directed the treatment accordingly. For twenty-four hours before death there was a marked inequality of the pupils, that on

the injured side being more dilated. The eye on that side became dry, owing to the arrest of the lachrymal secretion, the upper lid became immovable, half open. The conjunctiva on the same side was deeply injected. For a part of the time the muscles of the back of the neck were in a state of spasm.

These two cases, although widely different in some respects, both illustrate the insidious approach of a very dangerous inflammation. If, in bringing these cases to the notice of the Society, I have succeeded in warning any one against a possible source of danger, I shall consider myself fortunate. Perhaps the fatal cases are not reported as often as they should be. One does not like to parade his failures before the public.

TWO PHILADELPHIA DOCTORS.

Doctor X. is an eminent physician of Philadelphia: in manner he is brusque and overbearing. Among his office patients one morning was a gentleman, who, after occupying exactly five minutes of the great man's time, took a ten dollar note from his pocket and inquired the fee. "Fifty dollars," said the impatient medical man. The patient demurred a little, whereupon the physician rudely remarked, "Well, what do you expect to pay? Give me what you have," and, on receiving the ten dollar bill, turned scornfully to his negro servant, and handing him the money said, "That's for you, Jim," but lost his temper still more when his patient coolly said, "I did not know that you had a partner. Good morning, doctor."—*New Remedies*, August, 1881.

Mrs. Y., the wife of an eminent and amiable physician of Philadelphia discovered that her husband received far more patients into his office than the cash realized, or the charges made, would indicate, set about to mend matters. Unfortunately for the inauguration of the scheme, Dr. Y., had invited a friend to spend the evening with him, and Mrs. Y. discovering his prolonged presence in the office, scored the friend for an office consultation, and sent the bill. A few weeks after the doctor met his friend on the street and inquired why he had not been around again, remarking that he enjoyed his visit very much. Whereupon his friend replied, "What are you going to charge me *this* time?" Y. not knowing about the Madame's transactions was chagrined to see his visitor produce a receipt for office consultation.

SELECTED PAPERS.

PNEUMONIA CUT SHORT.

By OTIS F. MANSON, M. D., formerly of North Carolina.

“ La médecine ne s'enrichit que par les faits; fournir de nouveaux faits, ce serait donc fournir de nouvelles lumières.”

Broussais.

Having given to the profession of Virginia and North Carolina a series of articles on the most important forms of malarial diseases, as they have appeared under my observation for the past seventeen years, I offer, in addition, a few brief histories of the most important cases of each of these varieties, in order more clearly to define their features, illustrate their nature, and to indicate their modifications of treatment which circumstances may require. I regret that I cannot at present give the appearances after death, it being my design at some future time to supply this deficiency; but it is hoped that this temporary omission may be forgiven, if in lieu of it I shall be able to transcribe correct representations of the phenomena presented during life, and to direct attention to a plan of treatment which I regard as possessing prominent claims to investigation.

The form of pneumonia of which the following cases are examples, is, in my opinion, that which has been endemic in the Southern States from the remotest period of which we have any medical record, down to the present day. Originally passing under the various designations of bilious pleurisy, head pleurisy, winter fever, lung fever, and many others, until the developments in morbid anatomy having demonstrated the fact that the majority of cases termed pleuritic were really affections of the lung parenchyma (the inflammation of the pleural membrane being circumscribed and comparatively unimportant), the term pleurisy and its adjuncts gradually fell into disuse. Unhappily, however, in importing the morbid anatomy of the disease, we not only copied the views of its pathology based thereon—not only committed the fatal error of imitating the English and continental methods of treatment—but the vital history of the malady also passed away. As erroneous views had been formed of its organic changes, it was thought necessary to discard the past records of the rational symptoms, and at one fell

swoop, the accumulated observations of years, in regard to its course, nature, peculiarities, complications, duration, terminations and treatment, were swept into oblivion, and a system of therapeutics, guided by physical signs, and based on dead-house revelations, was erected in their stead. Alas for humanity—for science—that this was and is. The lancet has, in consequence, shed the blood of thousands; antimony has paralyzed the already feebly-resisting vital force of its myriad victims; and the southern physician, now groping darkly in the labyrinth of conflicting doctrines, now vibrating between the teachings of authority and the sterner teachings of the bedside, has finally too often been condemned to hopeless inactivity, and suffered the destroyer to pursue his ruthless course unmolested. To-day, from the loftiest pinnacle of modern science, the genius of medicine replies with melancholy wail to the agonizing cry of the old Roman of the seventeenth century:

O! quantum difficile est curare morbus pulmonum!
O! quanto difficilior eosdem cognoscere!*

Let us then retrace our steps. Let us exhume from the buried past the treasures laid up by those who have gone before us. Let us shake off the dust in which time has enveloped those precious tomes, too long despised and neglected—and with the lights of past ages to guide our steps, let us again go forward, ignoring no additional sources of information, examining every fact presented to us, whether developed by the scalpel, the stethoscope, the crucible or the lens, but holding all in subjection to the tribunal of that “noble and most sovereign reason,” with which we are munificently endowed.

In order that the following cases may be more clearly understood, I must beg the reader to refer to my papers on Malarial Pneumonia, in the ninth volume, and on Remittent Fever, in the fourth volume of this journal.

CASE I.—Miss ———, aged 13, delicately formed, dark hair, fair skin, good complexion, has been sick five days. Her attack was ushered in by a chill, followed by well developed fever, headache, constant nausea, and frequent vomiting of the gastric secretions, tinged with bile. On the third day the pleuritic pain and cough

*Baglivi, Opera Omnia Med. Pract. (De Pleuritide) 34.

first appeared, and on the next (the fourth), copious ferruginous expectoration ensued. Owing to the excessive gastric irritability, but little medicine has been taken, save a few minute doses of calomel; and on yesterday, during a temporary cessation of nausea, small doses of tartar emetic were given, but soon necessarily abandoned. Her bowels have acted moderately, but the fluidity of the discharges evince a tendency to diarrhœa. Her fever has remitted every morning, and the evening exacerbations have been marked. She has not slept, save a few moments, since the commencement of her illness. The coolness of the extremities, usually present in the morning in this disease, has not been observed by the attendant.

Present Condition, Fifth Day of the Attack.—Intense pleuritic pain in the left side; *large crepitation* in upper lobe of left lung; dulness and absence of respiratory murmur or râle from the fourth rib to base, anteriorly; universal dulness, left posteriorly; right lung free and resonant throughout, with exaggerated respiration (puerile); copious rusty sputa; respiration frequent, irregular and painful; has been sleepless the whole of the past night; nausea continues, but vomiting not so frequent; pulse 128, quick and full, but not hard; tongue covered with thick ash-colored fur, inclined to be dry, pointed and red at the extremity; skin hot and dry; intense headache; eyes injected and cheeks flushed. In this condition, at 7 o'clock in the morning, I gave her 10 grains of sulphate of quinine in a capsule of lichen;* and at 10½ A. M., the pulse being reduced only 10 beats, I gave six grains more. At 11½ A. M., she fell asleep under its influence, the pulse continuing to fall until midnight, when she became free from fever, pain and every uncomfortable symptom. We append a table, which will give at a glance the result:

Patient—Female, aged 13 years:

7	o'clock A. M.,	pulse 128.	R	10 grs. sulph. quinine.
10½	"	"	R	6 grs. "
11½	"	"		Now sleeping quietly.
5	"	P. M.,		Perspiring; sleeping.
6	"	"		" skin pleasant.
7½	"	"		" "
10½	"	"		" "
Midnight,		" 88.		no fever.

*These little French inventions (furnished me by my friends, Messrs. Pureell Ladd & Co., of Richmond, who keep everything which is novel as well as pure in their line), will be found very useful in giving quinine in cases attended with gastric irritability. Grind the crystals finely in a mortar; make into a pilular mass with syrup of gum-arabic, and place in the capsule: one of which will hold 10 grains of the sulphate thus prepared.

Remarks.—It will be seen that under the influence of 16 grains of quinine in a patient 13 years of age, on the fifth day of her illness, this case of perfectly developed pneumonia was arrested in 17 hours. No medicine was given afterwards. There was no return of pain. The expectoration lost its sanguineous character entirely in 36 hours afterwards, and the patient steadily convalesced, without an untoward, symptom, without bleeding, local or general blistering, antimony or mercury.

It may be here enquired, why I did not administer some expectorant? I reply, that, guided by the views I entertain of the pathology of this disease, as it presents itself to me, that it is not primarily a phlegmasia, but a fever; a disease of the general system; the affections of the lung being only a local determination, produced by the predisposing tendencies of the season, I therefore awaited confidently the disappearance of the local symptoms arising from congestion of the vessels of the liver, stomach and bowels (as evinced by the nausea, vomiting of bile and tendency to diarrhoea), and last in *the order of its occurrence, of the lungs*. Had this, however, not promptly occurred, there was nothing in the foregoing treatment which would have interfered with the use of remedies addressed to the local symptoms; but on the contrary, the arterial system was now placed in the most favorable condition to facilitate their action.

I wish to draw particular attention to the production of sleep in this case: I do not think that it is generally known that quinine possesses narcotic properties. Of this fact its action in many cases in different diseases several years since fully convinced me. I will here only allude to cases from my note book, in which it promptly induced sleep in delirium tremens, hysterical convulsions, and in fever, where large doses of opium had failed to produce any impressions. I wish also to call attention to the sudden disappearance of the pleuritic pain in this case. This is a very common result in this treatment. It has often occurred to me to witness the speedy removal of this intolerable agony in a short space of time, after every other means had failed, viz: blood letting, local and general, blisters, fomentations, mercury, antimony and opium. This property alone should entitle the remedy to our highest appreciation. I regret that the number of respirations were not noted in

this case. I distinctly remember that the breathing was very rapid. In the next case, however, the effect of treatment on the respiration and physical signs will be more distinctly perceived.

CASE II.—Allen, a young man aged 21 years, a carpenter, hardy, robust, florid complexion, dark hair and eyes, has been unwell for three days ; thinks he has had chills ; knows that he has been feverish, with headache, loss of appetite, and slight cough ; has nevertheless kept at work until evening before the last, when he was seized with pain in the side and severe cough.

Present Condition, November 31, 5 o'clock, P. M.—Intense pain in left side ; irregular breathing ; respiration 38 ; cough very painful ; copious bloody sputa ; intense headache ; eyes injected ; face suffused with a deep-red glow ; tongue heavily coated with a dirty-white fur, and inclined to be dry ; mouth glutinous, with brown incrustations on his lips and gums ; pulse 120, of moderate volume and force ; skin hot, but slightly moist ; bowels quiet. Physical signs : Marked dulness in left side posteriorly from base to apex of lung ; *bruit de taffetas* (Grisolle) between scapulæ, very distinct ; anteriorly, circumscribed crepitant râle below clavicle ; *right side free*. Prescribed : At 9 o'clock to-night he is to take 20 grains of calomel, which is to be followed at midnight by 20 grains of sulphate of quinine in a wineglassful of water, and at 4 o'clock in the morning 10 grains of quinine in the same manner ; warm poultices to the left side. I could not stay with this patient as I desired.

Dec. 1st, 10 A. M.—I find the patient much improved ; calomel has operated three times ; pulse reduced to 100 ; respirations 28 ; cough rare and slight ; pain much less ; breathing more regular ; skin moist and warm ; slightly deaf from the quinine. Prescribed calomel, 1 grain ; ipecac, $\frac{1}{2}$ grain, every two hours until six doses are taken.

Afternoon, 5 o'clock.—Head entirely relieved ; sputa more liquid and less bloody ; pulse 100 ; respirations 24 ; pain very slight ; coughs very seldom. Prescribed : At 9 o'clock to-night he will take 10 grains of calomel and one grain of ipecac, and at 3 o'clock in the morning 16 grains of sulphate of quinine. Continue warm poultices.

Dec. 2d, 1 o'clock P. M. (could not get to the patient earlier.) Pain in the side and cough have nearly disappeared ; pulse 78 ;

respirations 20 ; skin soft and moist, without febrile warmth ; has had five or six dark, bilious evacuations in the night. No medicine prescribed ; continue cataplasms ; diet, tea and bread ; has refused all nourishment heretofore.

Dec. 3d, 4 P. M.—Pulse 62 ; respirations 18 ; skin natural ; bowels quiet. Chest fully examined. Right side free ; very slight dulness posteriorly and inferiorly over lower lobe left lung ; *rhonchus crepitans redux* from thence to apex ; cough very slight ; mucous expectoration ; no pain ; tongue cleaning. Diet, buttermilk and cornbread (which he prefers).

Dec. 4th, 10 A. M.—Imprudently sat up yesterday evening, his house being an open, damp log cabin—probably, in consequence of which, I do not find him so well to day. Tongue inclined to be dry, and rather florid at the tip and edges. His pulse, which is 72, does not denote fever, but he complains of *soreness* of the left *side* and of *the throat*, and there is some flushing of his cheeks and warmth about his forehead. Prescribed calomel, 1 grain every two hours until his bowels are gently moved, and a blister to the left side for security.

Dec. 5th, 3 P. M.—Comfortable ; little or no cough ; blister has drawn well ; appetite returning ; pulse and respiration natural. Discharged.

We append a table showing the result :

Patient—Male, aged 21 :

Nov. 31,	5	o'clock P. M.,	pulse 120, resp. 38.	
"	9	"	" 120, " 38.	R 20 grs. quinine.
Dec. 1,	4	A. M.,	" 120, " "	R 10 grs. quinine.
"	10	"	" 100, " 28.	
"	5	P. M.,	" 100, " 24.	
Dec. 2,	3	A. M.,	" 100, " "	R 16 grs. quinine.
"	1	P. M.,	" 78, " 20.	
Dec. 3,	4	"	" 62, " 18.	
Dec. 4,	10	A. M.,	" 72, " 18.	

The fact worthy of note in this case, is the prolonged and steadily increasing sedative action of quinine on the heart for 36 hours after the last dose was given, viz : At 3 o'clock in the morning 16 grains of quinine were given, which reduced the pulse to 78 in 10 hours, and still continuing to manifest its influence for 27 hours

longer, finally reduced it to 62 beats per minute, after which it gradually arose to the normal standard. This effect, known to me for many years, has not, however, escaped the scrutiny of Briquet.* He did not, however, observe it in pneumonia, as concerning the effect of quinine in that disease he had no experience, I will close this paper, by relating an interesting case, to which I may hereafter revert as illustrative of the nature of this disease.

CASE III.—Lee, aged seven years, a little son of C. H. K. Taylor, Esq., the senator from Granville, was seized with a chill at school on the morning of November 2d, followed by active fever, headache, nausea, vomiting, and pleuritic pain in the left side; has been delirious and extremely restless on the evening of the second and third—the delirium commencing about noon and increasing in violence until late in the night when it has gradually subsided (without, however, terminating in sleep); so that he has been apparently rational on the mornings of each of those days. I saw him first on the morning of the fourth, at 10 o'clock.

Condition.—Extreme restlessness; pulse 142, of moderate fulness and compressible; respiration painful, very frequent and irregular; expectoration bloody, and very copious, but not very viscid; skin hot; tongue dry, heavily coated, pointed, and red at the extremity and edges; constant nausea, thirst, and frequent vomiting; bowels inclined to be loose; complains violently of headache and pain in the left side; seems to be rational. Physical signs: General dullness in left side, posteriorly, but not entirely flat; anteriorly, dullness over lower half of lung, and absence of murmur over the whole space; deficient in resonance; above this line, *crepitation* with *large bubbles*; right side free.

This, it will be perceived, is a well marked case, the pathognomonic sputa being as abundant as it is usually seen in an adult. (I will here remark, that this is the youngest patient in whom I have witnessed this peculiar expectoration.) The auscultatory signs were well-marked, unless the absence of the true *primary crepitant rhonchus* be considered as rendering the diagnosis incomplete. (Of

*Il est assez souvent arrivé que l'influence sur la circulation a persisté plusieurs jours après la cessation du médicament et dans bien des cas les malades sont sortis de l'hôpital avec un pouls au-dessous du type physiologique. *Traité Therapeutique du Quinquina*, Paris, deuxième ed. 1855.

this, more hereafter.) I prescribed for this little patient minute doses of calomel every half hour, to be taken throughout the day and night; ice to eat; lime water and milk; sinapisms, followed by bran poultices to the side.

Nov. 5th, 11 A. M.—The delirium came on again yesterday, and continued until this morning, and he now again appears to be rational. Has retained very little medicine. Condition similar to that presented yesterday. I would not remove the warm poultices to auscult the chest. I now resolved to give the *veratrum viride* a trial, and directed two drops of Norwood's tincture every three hours until his pulse should fall to 80. At the third dose it fell below 60, attended with general coldness of the surface, and its peculiar alarming symptoms of prostration. The medicine was, of course, discontinued, and some weak toddy given and warm applications made; after which he gradually rallied. The delirium, however, reappeared in the evening, and continued as before.

Nov. 6.—Condition unimproved; diarrhæa, but not excessive; stomach revolts at every thing. Prescribed sinapisms to epigastrium; continues poultices. Delirium recurs again to-day.

Nov. 7.—Condition unaltered.

Nov. 8.—I regard the case to-day as critical in the extreme. The delirium, though milder this morning, has *not perfectly intermitted*. The pulse is very quick, and the patient very restless. The expectoration is more viscid, less copious, and excreted with more difficulty. The respiration is very frequent, irregular and interrupted. *His stomach, however, seems to be more tranquil*. This morning at 11 o'clock I observed a marked coolness of his feet and hands for the first time, but his head is hot, and the rest of the surface of febrile warmth; his tongue is dry, heavily coated with a brown fur, pointed and very red at the tip and edges.

Reader, this boy will die unless the disease is arrested. He is nearly exhausted from want of sleep alone, having slept a few moments only since his illness began. I resolved, in spite of the gastric irritability, to give quinine, and accordingly prescribed six grs. to be taken at midnight and three grains at four o'clock in the morning—each dose to be suspended in a wineglassful of coffee. The case had now assumed a fearful interest to me. It seemed almost idle to hope that his stomach would retain the medicine, but

fortunately both doses *were retained*. I was compelled to leave him before the effects of the remedy were fully manifested, but his grandfather, Dr. Thos. Field, of Mecklenburg, Va., was with him during the time. Under its operation his pulse came down; he fell asleep soundly for several hours; his breathing became tranquil; the pain in the head and chest disappeared; and on my return in the evening at 5 o'clock, I found his pulse at 90, the patient quietly sleeping, and almost entirely free from fever. On the next morning a dose of six grains of quinine was given; and from this time he steadily convalesced, without the intervention of any other remedy.

As I feel the responsibility incurred in advocating this mode of treatment, I naturally feel desirous that those who may be led to adopt it from what I have written on the subject, should do so in a proper manner. I refer them, therefore, to the articles before designated, and will close by adding the following suggestions:

Give the quinine boldly, and continue it at intervals of four or five hours, until the pulse approaches the normal standard. I would advise that the first dose should not *be less than 20 grains* for an adult, if *decided febrile action* is present, to be repeated in doses of six to ten grains every four or five hours, until 40 grains are taken, *if necessary*, to reduce the pulse. I would not advise more than 40 grains to be given in the first 24 hours. Less (say 30 grs.) will ordinarily suffice.

The medicine must be persisted in from day to day until the symptoms yield. I have been compelled to continue it in some cases for four or five days, but this has been very rarely necessary. Usually it will only be required in diminished doses after the first day of treatment—the rule being simply *to increase the dose according to the violence of the febrile reaction*. It is my custom to *give the first dose during the latter hours of night*, or very early in the morning, and to *precede it* by three or four hours with a *full dose of calomel*. The sulphate restrains the mercurial from exciting hypercatharsis; the calomel resists the sedative influence of the quinine, besides possessing other virtues unnecessary to repeat.

Give the quinine early the first night the patient is seen. Do not wait until the lungs are blocked up with blood—and above all, do not postpone it until that *final, fatal delirium* appears. The pa-

tient is then usually doomed. *Do not, however, despair even then—* for this treatment will sometime rescue him when hope has almost fled.

When the pulse is *below the normal standard, do not give large doses of quinine.* The dose ought not to transcend three or four grains in four or five hours, nor should more than 12 or 15 grains be given in 24 hours, *watching closely its effects.* In *adynamia, small doses might depress too much.*

Weigh your medicine carefully. I attach a doubtful value to the experience of any one who pursues the uncertain and reprehensible custom, too prevalent among physicians, of *guessing* at the doses of their medicines. The pauper, convict and jail-bird have all of their medicines weighed or measured. Surely the worthy and respectable recipients of our skill deserve no less care.

Mode of administering quinine. I prefer to give it simply diffused in cool water. If this is impracticable, after being ground finely, it may be made into pills with syrup of gum arabic (U. S. Ph.), or placed in the capsule of lichen before mentioned, or mixed in coffee. I know no moderate quantity of this latter vehicle will interfere with the salutary action of the remedy, as Briquet (Op. cit. p. 306) erroneously supposes.

Be sure that your quinine is genuine. I use Powers' and Weightman's exclusively. The foreign articles in my hands have often failed.—*Virginia Medical Monthly*, February, 1859.

OUR MEDICAL LITERATURE.

We give the following extract from Dr. Billings address before the International Medical Congress. We wish we could give up our entire space to these papers.*

It is usual to estimate that about one-thirtieth part of the whole mass of the world's literature belongs to medicine and its allied

*For the information of our readers we will say that the American reprint of the London *Lancet* for October contains all the addresses in full, as delivered at this great gathering. Send 50 cents to Industrial Publishing Company, 1 Dey street New York.

sciences. This corresponds very well to the results obtained from an examination of bibliographies and catalogues of the principal medical libraries. It appears from this that our medical literature now forms a little over 120,000 volumes properly so-called, and about twice that number of pamphlets, and that this accumulation is now increasing at about the rate of about 1,000 volumes and 2,500 pamphlets yearly.

There are at the present time scattered over the earth about 180,000 medical men, who, by a liberal construction of the phrase, may be said to be educated—that is, who have some kind of a diploma, and for whose edification this current medical literature is produced. Of this number about 11,000 are producers of, or contributors to, this literature, being divided as follows: United States, 2,800; France and her colonies, 2,600; the German Empire and Austro-Hungary, 2,300; Italy, 600; Spain, 300; all others, 1,000. These figures should be considered in connection with the number of physicians in each country, but this I can only give approximately, as follows: United States, 65,000; Great Britain and her colonies, 35,000; Germany and Austro-Hungary, 32,000; France and her colonies, 26,000; Italy, 10,000; Spain, 5,000; all others, 17,000.

It will be seen from these figures that the number of physicians who are writers is proportionately greatest in France and least in the United States. As regards France, this is largely due to the requirements of a printed thesis for graduation, which of itself adds between six and seven hundred annually to the number of writers.

Excluding popular medicine, pathies, pharmacy, and dentistry, all of which were included in the figures for the annual product just given, we find that the contributions to medicine, properly so-called, form a little over 1,000 volumes and 1,600 pamphlets yearly.

The special characteristics of the literature of the present day are largely due to journals and transactions, and this is particularly true in medicine. Our periodicals contain the most original matter, and are the truest representations of the living thought of the day, and of the tastes and wants of the great mass of the medical profession, and a large part of whom, in fact, read very little else. They form about one-half of the current medical literature, and in the year 1879 amounted to 755 volumes, of which the United States produced 156, Germany 129, France 122, Great Britain 54,

Italy 65, and Spain 24. This is exclusive of journals of pharmacy, dentistry, etc., and of journals devoted to medical facts and isms.

Many of the medical journals are very short lived, but the total number is increasing. In 1879, 23 such journals ceased, but 60 new appeared, and in 1880 there were 24 deaths and 78 births in this department of literature. Over one-third of this fluctuation occurs in the United States alone, France being next in the scale, Spain third, and Italy fourth, while Great Britain is the most stable of all.

I have said that as regards scientific medicine, we are at present going to school to Germany. This, however, is not the case with regard to therapeutics, either external or internal—in regard to which I presume that the physicians of each nation are satisfied as to their own preëminence. At all events it is true that for the treatment of the common diseases, a physician can obtain his most valuable instruction in his own country, among those whom he is to treat. Just as each individual is in some respects peculiar and unique, so that even the arrangement of the minute ridges and furrows at the end of his forefinger differs from that of all other forefingers, and is sufficient to identify him; and as the members of certain families require special care to guard against hæmorrhage, or insanity, or phthisis; so it is with nations and races. The experienced military surgeon knows this well, and in the United States, which is now the great mixing ground, illustrations of race peculiarities are familiar to every practitioner.

From several sources of high authority there have come of late years warning and laments that science is becoming too utilitarian. For example, Prof. Du-Bois-Reymond in his address upon civilization and science, says that that side of science which is connected with the useful arts is steadily becoming more prominent, each generation being more and more bent on material interests. “Amid the unrest which possesses the civilized world, men’s minds live, as it were, from hand to mouth. * * * * *

And if industry receives its impulse from science, it also has a tendency to destroy science. In short, idealism is succumbing in the struggle with realism, and the kingdom of material interests is coming.” Having laid down this rather pessimistic platform he goes on to state that this is especially the case in America, which is

the principal home of utilitarianism, and that it has become the custom to characterize as "Americanization" the dreaded permeation of European civilization by realism. If this characterization is correct, it would seem that Europe is pretty thoroughly Americanized as regards attention to material interests and appreciation of practical results. But the truth of the picture seems to me doubtful, science is becoming popular, even fashionable, and some of its would be votaries rival the devotees of modern æstheticism in their dislike and fear of the sunlight of comprehensibility and common sense. The languid scientific swell who thinks it bad style to be practical, who takes no interest in anything but pure science, and makes it a point to refrain from any investigations which might lead to useful results, lest he might be confounded with mere "practical men" or inventors, exists and has its admirers. We have such in medicine, and their number will increase.

While it is true that to the graduate of thirty years ago much of the physiological literature of the present day is an unknown tongue, it is also true that the physiologist of the present, who confines himself to laboratory work, will find himself distanced by the man who keeps his clinical and pathological studies and his experimental work well abreast.

There must be specialties and specialists in medicine, and the results will be both good and evil; but the evils fall largely upon those specialists who have an insufficient general education, who attempt to construct the pyramid of their knowledge with the small end as a foundation. It has been said by Dr. Hodgen that "in medicine a specialist should be a skilled physician, and something more; but that he is often something else—and something less." There is truth in this; truth which the young man will do well to consider with care before he begins to specialize his studies; but, on the other hand, it is also true that the great majority of men must limit their field of work very much and very clearly if they hope to achieve success. The tool must have an edge if it is to cut. It is by the labor of specialists that many of the new channels for thought and research have been opened, and if the flood has sometimes seemed to spread too far, and to lose itself in shallow and sandy places, it has nevertheless tended to fertilize them in the end.

Whatever may be the chosen line of the book collector, he is the

special helper of the public library, and this whether he intend it or not. In most cases his treasures pass through the auction room, and sooner or later the librarian, who can afford to wait, will secure them from further travel. Thanks to the labors of such collectors, I think it is safe to say—what certainly would not have been true twenty years ago—that if the entire medical literature of the world, with the exception of that which is collected in the United States, were to be now destroyed, nearly all of it that is valuable could be reproduced without difficulty.

The analogies between the mental and physical development of an individual, and of a nation or society, have been often set forth and commented on, but there is one point where the analogy fails as regards the products of mental activity—and that is, that as yet we have devised no process for getting rid of the exuviae. Growth and development in the physical world imply the changes of death as well as of life—that with the increase of the living tissues there shall also be the excretion and destruction of dead, outgrown and useless matters which have had their day and served their purpose. But *littera scripta manent*. There is a vast amount of this effete and worthless material in the literature of medicine, and it is increasing rapidly. Our literature is, in fact, something like the inheritance of the golden dust-man, but with this important difference, viz., that when the children raked a few shells or bits of bone from the dust-man's heap, and, after stringing them together and playing with them a little while, threw them back, they did not thereby add to the bulk of the pile; whereas our preparers of compilations and compendiums, big and little, acknowledged or not, are continually increasing the collection, and for the most part with material which has been characterized as “superlatively middling, the quintessential extract of mediocrity.” A large medical library is in itself discouraging to many inquirers, and I have become quite familiar with the peculiar expression of mingled surprise and awe, and despair which is apt to steal over the face of one not accustomed to such work when he first finds himself fairly in the presence of the mass of material which he wishes to examine for the purpose of completing his ideal bibliography of—let us say epilepsy, or excisions, or the functions of the liver.

Let such inquirers, as well as those who regret that they have no

access to such large libraries, and must therefore rely on the common text-books and current periodicals for bibliography, console themselves with the reflection that much the larger part of all our literature which has any practical value belong to the present century, and, indeed, will be found in the publications of the last twenty years.

Let us consider each of these points briefly. Very, very few are the men who can by and for themselves see and describe the things that are before them. Just as it took thousands of years to produce a man who could see what now any one can see when shown him, that the star Alpha in Capricorn is really two separate stars, so we had to wait long before the man came who could see the difference between measles and scarlatina, and still longer for the one who could distinguish between typhus and typhoid, Said Plato, "He shall be as a god to me who can rightly divide and define." Men who have this faculty—the "Blick" of the Germans—we cannot produce directly by any system of education; they come, we know, not when or why, "forming a small band, a mere understanding of whose thoughts and works is a test of our highest powers. A single English dramatist and a single English mathematician have probably equalled in scope and excellence of original work in their several fields all the like labors of their countrymen put together."

The word pictures of disease traced by Hippocrates and Sydenham, or even those of Graves and Trousseau, interesting and valuable as they are, are not comparable with the records upon which the skilled clinical teacher of the present day. Yet how imperfect in many cases are even the best of these records as compared with what might be given with the resources which we have at our command. The temperature chart has done away with the errors which necessarily follow attempts to compare with the memory of sensations perceived last week with the sensations of to-day, and the balance and the burette enable us to estimate with some approach to precision the tissue-changes of our patients by the records of change in the excretions which they furnish; but we must still trust to our memory or the imperfect descriptions of what others remember, when we attempt to compare the results obtained on successive days by auscultation or percussion, although the phonograph or microphone strongly hint to us the possibility of either

accurately reproducing the sound of yesterday, or of translating them into visible signs, perhaps something like the dot and dash record of the telegraph code, which could then be given to the press, and so compared with each other by readers at the antipodes.

But little over a hundred years ago, Haller, in Göttingen, was professor of anatomy, botany, physiology, surgery and obstetrics, and lecturer on medical jurisprudence. At the same time he was writing one review a week, and summing up existing medical science in his "Bibliotheca." To-day any one of these branches require all the time of the most energetic and learned of our contemporaries, but, on the other hand, the well-educated medical graduate of to-day could give Haller valuable instruction in each of the branches of which he was professor. It is also true, as I have pointed out, that our actual progress is by no means in proportion to the work done, nor as great as these merely quantitative statements would seem to make it.

Science has been termed "the topography of ignorance." From a few elevated points we triangulate vast spaces, inclosing infinite unknown details. We cast the lead and draw up a little sand from abysses we shall never reach with our dredges.

In days of old, when the profession of medicine, or of a single medical specialty, was an inheritance in certain families, a large part of their knowledge and the efficiency of their remedies was thought to depend upon these being kept a profound mystery. Among the precepts of magic there was no more significant one than that which declared that the communication of the formula destroyed its power, and that hence attempts to reveal the secret must always fail.

We have changed all that. Every physician hastens to publish his discoveries and special knowledge, and a good many do the same by that which is not special, or which is not knowledge. For the individual, in a degree—for the nation or the race in a much greater degree—the literature produced is the most enduring memorial.

The First Hypodermic Use of Quinine.—Dr. W. J. Moore claims, in the *British Medical Journal*, that he first used quinine by subcutaneous injection in 1862.

OFFICIAL RECORD OF THE POST-MORTEM EXAMINATION OF THE BODY OF PRESIDENT J. A. GARFIELD, MADE SEPTEMBER 20, 1881, COMMENCING AT 4:30 P. M., EIGHTEEN HOURS AFTER DEATH, AT FRANCK-LYN COTTAGE, ELBERON, NEW JERSEY.*

Present and assisting, Dr. D. W. Bliss ; Surgeon-General J. K. Barnes, U. S. Army ; Surgeon J. J. Woodward, U. S. Army ; Dr. Robert Reyburn ; Dr. Frank H. Hamilton ; Dr. D. Hayes Agnew ; Dr. Andrew H. Smith, of Elberon (and New York) ; and Acting-Assisting-Surgeon D. S. Lamb, of the Army Medical Museum, Washington, D. C.

Before commencing the examination, a consultation was held by these physicians, in a room adjoining that in which the body lay, and it was unanimously agreed that the dissection should be made by Dr. Lamb, and that Surgeon Woodward should record the observations made. It was further unanimously agreed that the cranium should not be opened. Surgeon Woodward then proposed that the examination should be conducted as follows :—

That the body should be viewed externally, and any morbid appearances existing recorded. That a catheter should then be passed into the wound, as was done during life to wash it out, for the purpose of assisting to find the position of the bullet. That a long incision should next be made from the superior extremity of the sternum to the pubis, and this crossed by a transverse one just below the umbilicus. That the abdominal flaps thus made should then be turned back and the abdominal viscera examined. That after the abdominal cavity was opened the position of the bullet should be ascertained, if possible, before making any further incision : and that, finally, the thoracic viscera should be examined.

This order of procedure was unanimously agreed to.

The examination was then proceeded with, and the following *external appearances* were observed :—

The body was considerably emaciated, but the face was much less wasted than the limbs. A preservative fluid had been injected by the embalmer, a few hours before, into the left femoral artery ; the

*From the October number of the *American Journal of Medical Sciences*.

pipes used for the purpose were still in position. The anterior surface of the body presented no abnormal appearances, and there was no ecchymosis or other discoloration of any part of the front of the abdomen.

Just below the right ear, and a little behind it, there was an oval ulcerated opening, about half an inch in long diameter, from which some sanious pus was escaping, but no tumefaction could be observed in the parotid region.

A considerable number of purpura-like spots were scattered thickly over the left scapula, and thence forwards as far as the axilla. They ranged from one-eighth to one-fourth of an inch in diameter, were slightly elevated and furfuraceous on the surface, and many of them were confluent in groups of two to four or more. A similar but much less abundant eruption was observed sparsely scattered over the corresponding region on the right side.

An oval excavated ulcer about an inch long, the result of a small carbuncle, was seated over the spinous process of the tenth dorsal vertebra. Over the sacrum there were four small bed-sores, the largest about half an inch in diameter. A few acne pustules and a number of irregular spots of post-mortem hypostatic congestion were scattered over the shoulders, back, and buttocks. The inferior part of the scrotum was much discolored by hypostatic congestion. A group of hemorrhoidal tumors, rather larger than a walnut, protruded from the anus.

The depressed cicatrix of the wound made by the pistol-bullet was recognized over the tenth intercostal space, three and a half inches to the right of the vertebral spines. A deep linear incision (made in part by the operation of July 24th, and extended by that of August 8th) occupied a position closely corresponding to the upper border of the right twelfth rib. It commenced posteriorly about two inches from the vertebral spines and extended forwards a little more than three inches. At the anterior extremity of this incision there was a deep, nearly square, abraded surface about an inch across.

A well-oiled flexible catheter, fourteen inches long, was then passed into this wound, as had been done to wash it out during life. More resistance was at first encountered than had usually been the case, but after several trials the catheter entered, without

any violence, to its full length. It was then left in position, and the body disposed supinely for the examination of viscera.

The *cranium* was not opened.

A long incision was made from the superior extremity of the sternum to the pubis, followed by a transverse incision crossing the abdomen just below the umbilicus. The four flaps thus formed were turned back and the abdominal viscera exposed. The subcutaneous adipose tissue divided by the incisions was little more than one-eighth of an inch thick over the thorax, but was thicker over the abdomen, being about quarter of an inch thick along the linea alba, and as much as half an inch thick towards the outer extremity of the transverse incision.

On *inspection of the abdominal viscera, in situ*, the transverse colon was observed to lie a little above the line of the umbilicus. It was firmly adherent to the anterior edge of the liver. The greater omentum covered the intestines pretty thoroughly from the transverse colon almost to the pubis. It was still quite fat, and was very much blackened by venous congestion. On both sides its lateral margins were adherent to the abdominal parietes opposite the eleventh and twelfth ribs. On the left sides the adhesions were numerous, firm, well organized, and probably old;* on the right side there were a few similar adhesions and a number of more delicate and probably recent ones.

A mass of black coagulated blood covered and concealed the spleen and the left margin of the greater omentum. On raising the omentum it was found that this blood-mass extended through the left lumbar and iliac regions and dipped down into the pelvis, in which there was some clotted blood and rather more than a pint of bloody fluid.† The blood-coagula having been turned out and collected, measured very nearly a pint. It was now evident that secondary hemorrhage had been the immediate cause of death, but the point from which the blood had escaped was not at once apparent.

The omentum was not adherent to the intestines, which were

*These adhesions and the firm one on the right side, as well as those of the spleen, possibly date back to an attack of chronic dysentery from which the patient is said to have suffered during the civil war.

†A large part of this fluid had probably transuded from the injecting material of the embalmer.

moderately distended with gas. No intestinal adhesions were found other than those between the transverse colon and the liver, already mentioned.

The abdominal cavity being now washed out as thoroughly as possible, a fruitless attempt was made to obtain some indication of the position of the bullet before making any further incision. By pushing the intestines aside, the extremity of the catheter, which had been passed into the wound, could be felt between the peritoneum and the right iliac fascia; but it had evidently doubled upon itself, and although a prolonged search was made, nothing could be seen or felt to indicate the presence of the bullet, either in that region or elsewhere.

The abdominal viscera were then carefully removed from the body, placed in suitable vessels, and examined seriatim, with the following result:—

The adhesions between the liver and the transverse colon proved to bound an *abscess-cavity* between the under surface of the liver, the transverse colon, and the transverse meso-colon, which involved the gall-bladder, and extended to about the same distance on each side of it, measuring six inches transversely and four inches from before backward. This cavity was lined by a thick pyogenic membrane, which completely replaced the capsule of that part of the under surface of the liver occupied by the abscess. It contained about two ounces of greenish-yellow fluid—a mixture of pus and biliary matter. This abscess did not involve any portion of the liver except the surface with which it was in contact, and no communication could be detected between it and any part of the wound.

Some recent peritoneal adhesions existed between the upper surface of the right lobe of the liver and the diaphragm. The *Liver* was larger than normal, weighing eighty-four ounces; its substance was firm, but of a pale yellowish color on its surface and throughout the interior of the organ, from fatty degeneration. No evidence that it had been penetrated by the bullet could be found, nor were there any abscesses or infarctions in any part of its tissue.

The *Spleen* was connected to the diaphragm by firm, probably old peritoneal adhesions. There were several rather deep congenital fissures in its margins, giving it a lobulated appearance. It was abnormally large, weighing eighteen ounces; of a very dark, lake-

red color, both on the surface and on section. Its parenchyma was soft and flabby, but contained no abscesses or infarctions.

There were some recent peritoneal adhesions between the posterior wall of the *Stomach* and the posterior abdominal parietes. With this exception no abnormality was discovered in the stomach or *Intestines*, nor were any other evidences of general or local peritonitis found besides those already specified.

The *Right kidney* weighed six ounces, the *Left kidney* seven. Just beneath the capsule of the left kidney, or about the middle of its convex border, there was a little abscess one-third of an inch in diameter; there were three small serous cysts on the convex border of the right kidney just beneath its capsule; in other respects the tissue of both kidneys was normal in appearance and in texture.

The *urinary bladder* was empty.

Behind the right kidney, after the removal of that organ from the body; the dilated *track of the bullet* was dissected into. It was found that from the point at which it had fractured the right eleventh rib (three inches and a half to the right of the vertebral spines) the missile had gone to the left, obliquely forwards, passing through the body of the first lumbar vertebra, and lodging in the adipose connective tissue immediately below the lower border of the pancreas, about two inches and a half to the left of the spinal column, and behind the peritoneum. It had become completely encysted.

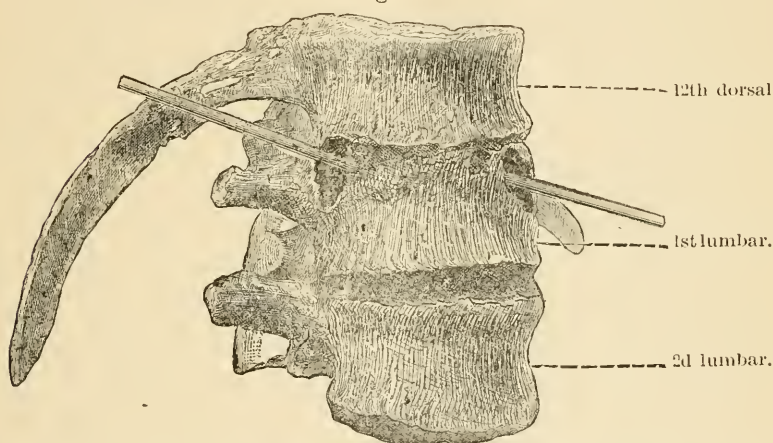
The track of the bullet between the point at which it had fractured the eleventh rib and that at which it entered the first lumbar vertebra was considerably dilated, and the pus had burrowed downwards through the adipose tissue behind the right kidney, and thence had found its way between the peritoneum and the right iliac fascia, making a descending channel which extended almost to the groin. The adipose tissue behind the kidney in the vicinity of this descending channel, was much thickened and condensed by inflammation. In the channel, which was found almost free from pus, lay the flexible catheter introduced into the wound at the commencement of the autopsy; its extremity was found, doubled upon itself, immediately beneath the peritoneum, reposing upon the iliac fascia, where the channel was dilated into a pouch of considerable size. This long descending channel, now clearly seen to have been

caused by the burrowing of pus from the wound, was supposed during life to have been the track of the bullet.

The last dorsal, together with the first and second lumbar vertebrae and the twelfth rib, were then removed from the body for more thorough examination.

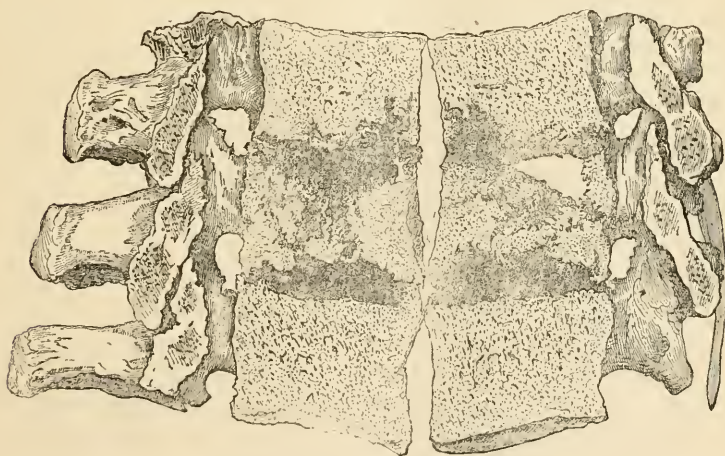
When this examination was made it was found that the bullet

Fig. 1.



Shows the course of the ball through the first lumbar vertebra, its direction being indicated by the probe.

Fig. 2.



Shows the above specimen sawn open.

had penetrated the first lumbar vertebra in the upper part of the right side of its body. The aperture by which it entered involved the intervertebral cartilage next above, and was situated just below and anterior to the intervertebral foramen, from which its upper margin was about one quarter of an inch distant. Passing obliquely to the left and forwards through the upper part of the body of the first lumbar vertebra the bullet emerged by an aperture, the centre of which was about half an inch to the left of the median line, and which also involved the intervertebral cartilage next above. The cancellated tissue of the body of the first lumbar vertebra was very much comminuted and the fragments somewhat displaced. several deep fissures extended from the track of the bullet into the lower part of the body of the twelfth dorsal vertebra. Others extended through the first lumbar vertebra into the intervertebral cartilage between it and the second lumbar vertebra. Both this cartilage and that next above were partly destroyed by ulceration. A number of minute fragments from the fractured lumbar vertebra had been driven into the adjacent soft parts.

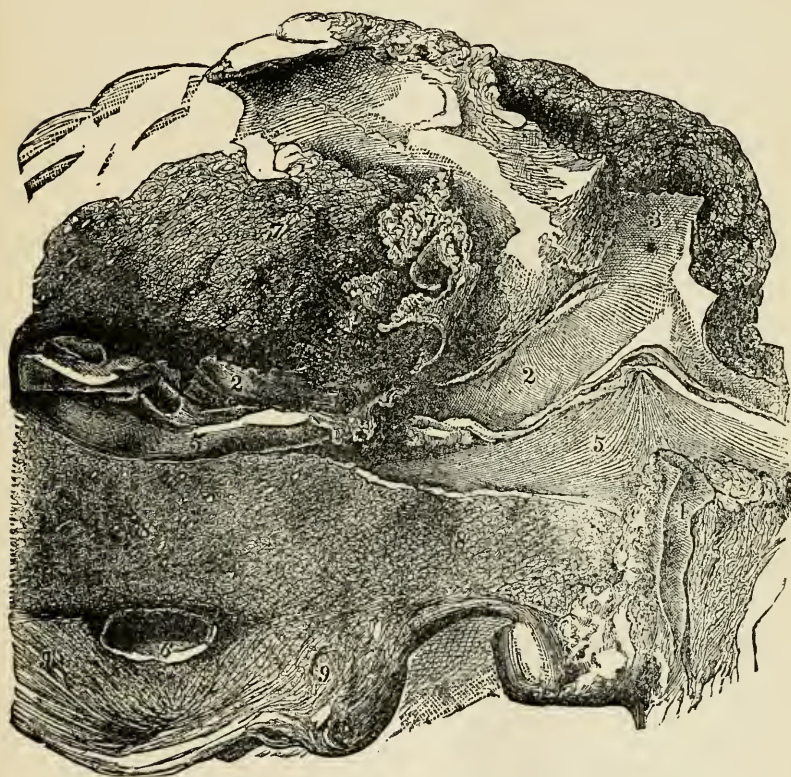
It was further found that the right twelfth rib also was fractured at a point one inch and a quarter to the right of the transverse process of the twelfth dorsal vertebra; this injury had not been recognized during life.

On sawing through the vertebra, a little to the right of the median line, it was found that the spinal canal was not involved by the track of the ball. The spinal cord and other contents of this portion of the spinal canal presented no abnormal appearances. The rest of the spinal cord was not examined.

Beyond the first lumbar vertebra the bullet continued to go to the left, passing behind the pancreas to the point where it was found. Here it was enveloped in a firm cyst of connective tissue, which contained besides the ball a minute quantity of inspissated, somewhat cheesy pus, which formed a thin layer over a portion of the surface of the lead. There was also a black shred adherent to a part of the cyst-wall, which proved on microscopical examination to be the remains of a blood-clot. For about an inch from this cyst the track of the ball behind the pancreas was completely obliterated by the healing process. Thence, as far backward as the body of the first lumbar vertebra, the track was filled with coagu-

lated blood, which extended on the left into an irregular space rent in the adjoining adipose tissue behind the peritoneum and above

Fig. 3.



1. The point at which the splenic artery gave way. 2, 2. The splenic artery. 3. The celiac axis. 4. The superior mesenteric artery. 5, 5. The splenic vein. 6. The cyst in which the ball was found. 7, 7. A portion of the mass of extravasated blood. 8, 8. The pancreas. 9, 9. Adipose tissue behind the transverse meso-colon.

the pancreas. The blood had worked its way to the left, bursting finally through the peritoneum behind the spleen into the abdominal cavity. The rending of the tissues by the extravasation of this blood was undoubtedly the cause of the paroxysms of pain which occurred a short time before death.

This mass of coagulated blood was of irregular form and nearly as large as a man's fist. It could be distinctly seen from in front, through the peritoneum, after its site behind the greater curvature

of the stomach had been exposed by the dissection of the greater omentum from the stomach, and especially after some delicate adhesions between the stomach and the part of the peritoneum covering the blood-mass had been broken down by the fingers. From the relations of the mass as thus seen it was believed that the hemorrhage had proceeded from the mesenteric arteries, but as it was clear that a minute dissection would be required to determine the particular branch involved, it was agreed that the infiltrated tissues and the adjoining soft parts should be preserved for subsequent study.

On the examination and dissection made in accordance with this agreement, it was found that the fatal hemorrhage proceeded from a rent, nearly four-tenths of an inch long in the main trunk of the splenic artery two inches and a half to the left of the cœliac axis. This rent must have occurred at least several days before death, since the everted edges in the slit in the vessel were united by firm adhesions to the surrounding connective tissue, thus forming an almost continuous wall bounding the adjoining portion of the blood-clot. Moreover, the peripheral portion of the clot in this vicinity was disposed in pretty firm concentric layers. It was further found that the cyst below the lower margin of the pancreas, in which the bullet was found, was situated three inches and a half to the left of cœliac axis.

Besides the mass of coagulated blood just described, another, about the size of a walnut, was found in the greater omentum near the splenic extremity of the stomach. The communication, if any, between this and the larger hemorrhagic mass could not be made out.

The examination of the *Thoracic Viscera* resulted as follows:—

The *Heart* weighed eleven ounces. All the cavities were entirely empty except the right ventricle, in which a few shreds of soft, reddish, coagulated blood adhered to the internal surface. On the surface of the mitral valve there were several spots of fatty degeneration; with this exception the cardiac valves were normal. The muscular tissue of the heart was soft, and tore easily. A few spots of fatty degeneration existed in the lining membrane of the aorta just above the semilunar valves, and a slender clot of fibrin was

found in the aorta, where it was divided, about two inches from these valves, for the removal of the heart.

On the right side slight pleuritic adhesions existed between the convex surface of the lower lobe of the lung and the costal pleura, and firm adhesions between the anterior edge of the lower lobe, the pericardium and the diaphragm. The *Right Lung* weighed thirty-two ounces. The posterior part of the fissure, between its upper and lower lobes, was congenitally incomplete. The lower lobe of the right lung was hypostatically congested, and considerable portions, especially towards its base, were the seat of broncho-pneumonia. The bronchial tubes contained a considerable quantity of stringy muco-pus; their mucous surface was reddened by catarrhal bronchitis. The lung tissue was œdematous,* but contained no abscesses or infarctions.

On the left side the lower lobe of the lung was bound, behind to the costal pleura, above to the upper lobe, and below to the diaphragm by pretty firm pleuritic adhesions. The *Left Lung* weighed twenty-seven ounces. The condition of its bronchial tubes and of its lung-tissue was very nearly the same as on the right side, the chief difference being that the area of broncho-pneumonia in the lower lobe was much less extensive in the left lung than in the right. In the lateral part of the lower lobe of the left lung, and about an inch from its pleural surface there was a group of four minute areas of gray hepatization, each about one eighth of an inch in diameter. There were no infarctions, and no abscesses in any part of the lung-tissue.

The surgeons assisting at the autopsy were unanimously of the opinion that on reviewing the history of the case in connection with the autopsy, it is quite evident that the different suppurating surfaces, and especially the fractured spongy tissue of the vertebra, furnish a sufficient explanation of the septic conditions which existed during life.

About an hour after the post-mortem examination was completed the physicians named at the commencement of this report assembled for further consultation in an adjoining cottage; a brief out-

*A part at least of this condition was doubtless due to the extravasation of the injecting fluid used by the embalmer.

line of the results of the post-mortem examination was drawn up, signed by all the physicians, and handed to Private Secretary J. Stanley Brown, who was requested to furnish copies to the newspaper press.

(Signed) D. W. BLISS,
“ J. K. BARNES,
“ J. J. WOODWARD,
“ ROBERT REYBURN,
“ D. S. LAMB.

As the above report contains paragraphs detailing the observations made at Washington on the pathological specimens preserved for that purpose, the names of Drs. F. H. Hamilton, D. Hayes Agnew, and A. H. Smith are not appended to it. It has, however, been submitted to them and they have given their assent to the other portions of the report.

THE NORTH CAROLINA MEDICAL JOURNAL offers as a premium for the best prepared and complete herbarium of the medicinal plants of the State, the following works, or their equivalent, in volumes the successful competitor may choose :

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The collection must be prepared by the person presenting it. Each specimen must be neatly mounted on stout white paper 9x14 inches, (two or three specimens can be put on a sheet when they are small) and the name marked on each. This offer is made to members of the State Medical Society, and to licentiates of the Board of Examiners who may not be members.


Herbaria must be sent in on the 2d Tuesday in May, 1882, at the Concord meeting. For further particulars address Editor of the JOURNAL.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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WATER SUPPLY OF TIDE-WATER TOWNS.

Notwithstanding the precedents and experiences of other and older communities, the question of the source of drinking water for towns is still a debatable one. Especially is this the case in southern tide-water regions. Unfortunately the question is rendered more complex by the financial interests which almost invariably preponderate in the discussion. This is an opportune time for a full and free examination of the public water supply, now that in this State, communities that have been inquiring into the domestic water supply, are moving towards the consummation of a plan to meet their wants.

There are four available sources of water, having more or less to be said in their favor. The earliest public source investigated in the South, was the experimental sinking of an artesian well in Charleston. Some very wise scientists were ready with their

arguments, pending the long and disappointing weeks of its construction, to prove that it was geologically impossible to get a supply in the situation selected by the Charleston authorities. One very learned article, which appeared in the *Wilmington Herald* by Dr. Joseph Togno, (known in the medical world as the translator of Bichat's Pathology, and to the people of Eastern Carolina as an enthusiastic propagator of foreign grapes,) was hardly dry, before the long looked-for stream gushed forth. However disappointing the quality of the water was for general use, the experiment showed that the plan was entirely feasible.

Artesian wells have been much in esteem in the States of Alabama and Mississippi, if not for the quality of the water, for the abundant and reliable supply. But the Charleston well was the first one sunk in the Southern Atlantic seacoast. We believe the saline ingredients of this well made it objectionable to most persons, but for bathing purposes, and for animals it was entirely acceptable. The example of Charleston was not followed by other cities and towns as far as we are aware, with the exception that in the town of Durham a well is now in progress.

Cistern water has been much more in favor, and its superiority in this State was first demonstrated by planters living upon the marl lands of the Eastern counties. Intelligent and careful observation and experiment showed, that field hands allowed to drink the spring water in these regions, were much more frequently attacked with malarial fever than those who had been supplied with cistern water. In Edgecombe county particularly, this observation was brought home with so much force, that some of the planters of that region provided their plantations with cisterns, and would not allow the use of any other water. It was not the science of the laboratory, therefore, that taught the first practical lesson upon the subject of drinking water, but intelligent experience which established a belief of which to this day firmly fixed in the minds of the majority. Cisterns have multiplied from that day, so that now, taking Wilmington for an example, few families having once received their supply from a properly constructed cistern would exchange for any other source. Unfortunately, a cistern of proper dimensions to furnish enough water for all emergencies, is expensive, and is beyond the means of the numerous class of our citizens who fall to the care of

the city when sickness overtakes them, the very class to which the supply of water is of vital importance.

A more copious and reliable supply of drinking water, therefore, than that cisterns could afford us, has become a serious question with growing towns. Moreover, the emergencies of great fires occurring in towns largely built of inflammable materials, and the need of a means of sewerage, have brought some of our towns face to face with the question of water supply.

Practically, we must leave out of consideration the general adoption of the storage of water in cisterns. It is very sure that whatever may be the source of drinking water selected, it will be a long time before persons able to own a well-constructed cistern, will be willing to substitute it for other water. And this brings us to the other sources available in tide-water districts.

We will take Wilmington for an example, and this is all the more appropriate because just now water works are in an advanced stage of progress here, and the question of the character of the water to be supplied, one of great doubt. Wilmington is built on a series of sand-hills, twenty-five miles from the mouth of the Cape Fear river, and immediately on its east bank. The tide ebbs and flows regularly. The North East Cape Fear river flows into the Cape Fear proper, just in front of the city. The river front of Wilmington is about two miles, and for a considerable portion of this front wooden wharves are built out into deep water, but for a considerable length there is an uncovered shore. Along this front several sewers empty their contents into the river. At a point in the northern limit of the city, known as Hilton, the water works company have commenced the erection of their pumping apparatus and have also erected their stand-pipe.

The water at this point is from the North East Branch of the river, and is seldom made turbid by alluvial washings as in times of freshets. Further up this stream, a creek flows into it, upon which is located three cemeteries, and a fourth one just started. From time to time butcher houses have been located on or near these streams.

Like so many streams in the low country, the water in this one is dark reddish-yellow, owing to the humic acid in solution, and also probably to the staining from the exposed roots of trees. It is

not unlike in its appearance to that of Dismal Swamp, and like that water, is esteemed by vessels, for its keeping properties, after it has been rectified by precipitating its solid contents. Masters of vessels, however, are taught by experience to avoid the use of this water directly from the stream, because of the diarrhœal troubles which it causes. Experience of railroad companies and saw mills, has also been opposed to the use of this water freshly drawn from the river.

Since the question of water supply has been agitated here, every effort has been made by the State Board of Health, and no expense spared, to get analyses of the waters made at different seasons of the year, in order that those interested,—capitalists, and municipal authorities, and citizens generally,—should have all the information possible to guide them in this new venture.

The analyses have been carefully and accurately made, by Dr. Ledoux and Dr. Charles W. Dabney, Jr., Chemist of the State Board of Health, and also by Prof. Nichols, of Boston. The analyses made by Prof. Nichols were at the instance of the water works company. A comparison of some of these analyses is given below.

The other available source of water, was from a pond, at the southern extremity of the town. This pond is a mile and a half long, and is supplied with water from the small streams, arising in the sand hills. The water is really rain water percolated through the sand hills, and caught in a natural basin of sand. Sand ridges separate this pond from the city, so that no drainage or sewerage can possibly empty into it at present, and there is little danger from prospective contamination. This pond is a property over which absolute control could be obtained, and by the expenditure of the necessary amounts its margins could be thoroughly cleansed and rid of mud deposits, and of decaying trees. An examination of the comparative analyses will show at a glance all that chemistry can do for the subject.

LOCALITY.	TOTAL SOLIDS GRAINS PER GALLON.	CHLORINE PER GALLON.	FREE AMMONIA PARTS PER MILLION.	ALBUMINOID AMMONIA PART PER MILLION.	CHEMIST.
Greenfield Pond.....	4.7	1.6	.34	.30	} A. R. Ledoux. Charles W. Dabney, Jr.
Greenfield Pond.....	4.6	1.6	.21	.25	
North East River.....	3.9	4.5	.04	.17	
Smith's Creek.....	6.7	1.7	.05	.30	

NOTE.—It is unfortunate that the record of the seasons at which these waters were collected are not just now at hand. It can be consulted as soon as the laboratory is permanently fixed at Raleigh. Samples of water were taken at different seasons to determine the variations. It will be seen that the water of Smith's Creek, varies materially from the N. E. River of which it is a branch. The chemical studies of these waters, although numerous, are not sufficiently to decide the question definitely.

We say all that chemistry can show us, because, after all, chemical analysis can only give us an approximate knowledge of purity. The surroundings of every water source, must determine its advantages. It would not be wise to obtain water from a stream or a pond, if it could not be settled beyond doubt, what were the probable chances of pollution. If a river has no legal or other protections against pollution, and may probably, receive the increased sewage which a free distribution of water is to bring into it, it could not be conscientiously selected as a source of water, at any point within the probable range of sewage and other pollution.

The question as to how near water works could be located to a city on a river into which sewage is constantly pouring, is not a matter of accurate knowledge as yet.

The following quotations may attach some weight to the subject, and upon these we will let the subject rest, for the present.

“It is evident, that so far from sewage mixed with twenty times its volume of water being oxidized during a flow of ten or twelve miles, scarcely two-thirds of it would be so destroyed in a flow of 168 miles at the rate of one mile per hour, or after the lapse of a week. In fact, whether we examine the organic pollution of a river at different points of its flow, or the rate of disappearance of the organic matter of sewage when the latter is mixed with fresh water and violently agitated in contact with air, or finally, the rate at which dissolved oxygen disappears in water polluted with five per cent. of sewage, we are led in each case to the inevitable conclusion that the oxidation of the organic matter in sewage proceeds with extreme slowness, even when the sewage is mixed with a large volume of unpolluted water, and that it is impossible to say how

far such water must flow before the sewage-matter becomes thoroughly oxidized. It will be safe to infer, however, from the above results that there is no river in the United Kingdom long enough to effect the destruction of sewage by oxidation.

"These results confirm the opinion arrived at from theoretical considerations, and expressed by Sir Benjamin Brodie in his evidence, given before the former Rivers Pollution Commission (First Report, River Thames, Vol. II., Minutes of Evidence), page 49). His evidence was to the following effect:—

"I should say, that it is simply impossible, that the oxidizing power acting on sewage, running in mixture with water over a distance of any length, is sufficient to remove its noxious quality. I presume that the sewage can only come in contact with oxygen contained in the water, and also from the oxygen on the surface of the water; and we are aware that ordinary oxygen does not exercise any rapidly oxidizing power on organic matter. I believe that an infinitesimally small quantity of decaying matter is able to produce an injurious effect upon health. Therefore, if a large proportion of organic matter was removed by the process of oxidation, the quantity left might be quite sufficient to be injurious to health. With regard to the oxidation, we know that to destroy organic matter the most powerful oxidizing agents are required; we must boil it with nitric acid and chloric acid and the most perfect chemical agents. To think to get rid of organic matter by exposure to the air for a short time is absurd."

"There is no process practicable on the large scale by which that noxious material (sewage matter) can be removed from water once so contaminated, and, therefore, I am of the opinion that water which has once been contaminated by sewage or manure matter, is thenceforth unsuitable for domestic use."

AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association meets in Savannah, beginning on the 18th November.

These meetings have always had important practical results, and our Southern States should be well represented. At present there are only two members from North Carolina. Surely this does not evince much interest in the progress of Public Health Sciences on the part of our medical men, and it is not the way to further the interests of our own State Board of Health. We bespeak a good delegation of working sanitarians from our State.

REVIEWS AND BOOK NOTICES.

ARTIFICIAL ANÆSTHESIA AND ANÆSTHETICS. By HENRY B. LYMAN, A. M., M. D. New York: William Wood & Co., 29 Great Jones St. 1881. Pp. 338. September Number Wood's Library of Standard Medical Authors.

But few treatises on anæsthetics are free from partisan bias, but we can cheerfully accord to this one a fair scientific resumé of the whole range of anæsthesia and anæsthetics, as free from individual opinions as one would desire. Very excellent treatises were already accessible to the profession before the appearance of this one. The author says he has "endeavored to distil all the excellences of the writers who have investigated the subject of artificial anæsthesia. The practised expert will everywhere recognize the quality of Perrin, of Snow, of Simpson, of Sansom, of Anstie, of Turnbull, of Kappeler, and of Rottenstein." Disclaiming originality, as indeed any one must who writes on such a well-discussed topic of therapeutics, he has with excellent editorial judgment and skill rendered a valuable service to the profession. In fact the most useful works on medical topics, are those written by students, who having breadth of intellect to compass their subject, are able to digest it and present all its parts in proper perspective, and without false emphasis.

The history of anæsthesia is given as an introduction and is fairly well written, although it may not please the friends of the different claimants of the honor.

Passing by the Phenomena and Physiology of Anæsthesia, and Administration of Anæsthetics, we come to the practical and interesting chapter on the Treatment of Accidents of Anæsthesia. The accidents are treated under the head of Cessation of Respiration and Cessation of Circulation.

The first expedient mentioned in the condition of syncope, is to invert the patient. The patient to be anæsthetized should therefore be placed in such a position as to be easily inverted if the emergency arises. Artificial respiration, after the simple Sylvester method of alternately pressing the abdomen and chest wall, so as to expel the air in the lungs, and then drawing up the arms upward and outward in such a way as to elevate the ribs and expand the cavity of the thorax. As to the expedient of drawing the tongue

outward whenever respiration is obstructed, he quotes Dr. Benjamin Howard as saying that "the operation is of no more value than any other peripheral irritation of the superficial nerves of the body." We do not agree with the statement, for as the nerves of the throat lose their sensibility long after those which terminate in the skin, pulling the tongue forward may fail to raise the epiglottis from the glottis, but it has succeeded in the hands of very many surgeons, by arousing sensibility and the respiratory act, in the most painful moments of suspense. It is a procedure of great value whatever may be the theory advanced against it.

Faradization of the phrenic nerve, by pressing firmly one electrode over the right phrenic nerve, just outside the carotid artery in the neck, while the other electrode should be placed in contact with the wall of the thorax, over the sixth intercostal space on the right side of the body. The right side should be preferred to the left, in order to avoid the risk of arresting movements of the heart. The electrical currents should be completed only during the elevation of the arms in the Sylvester method of artificial respiration, and should be at once broken at the commencement of the depression of the ribs. These applications should be renewed twenty times in a minute. The electrical current should never be very energetic. It should never be strong enough to tetanize the diaphragm. General electrization of the surface of the body is worse than useless, because of the danger of tetanizing the heart. Such a result has been shown, by actual experiment on the lower animals to be inevitably fatal. The same thing is true of electro-puncture of the heart.

Many cases of recovery after apparent death from chloroform inhalation, are given and among the means employed were cold affusion upon the chest; insufflation and artificial respiration; drawing the tongue forward; injection of brandy and water into the rectum; electricity; electro-puncture in the region of the phrenic nerve; by inversion; (under which head the dramatic description by Marion Sims of that perilous and famous case of anæsthesia, in which Nélaton demonstrated the efficacy of inversion), by tracheotomy, by amyl nitrite. No mention is made of introducing ice into the rectum, and too little stress is laid upon the necessity of the operator continuing his incisions when it is possible, for really

the duty of the operator and anæsthetist should be entirely and distinctly separate at each surgical operation.

The use of chloroform for tooth extraction should be entirely discarded, our author thinks, and nitrous oxide should be preferred before all others for that purpose. In our experience, nitrous oxide has produced symptoms as alarming as those of chloroform. Twice we have seen asphyxia following the use of nitrous oxide, nearly carry off the same person, a brother physician, who had taken it to have teeth extracted; and many times we have seen the same person take chloroform without the slightest bad effect. The great danger in chloroforming a patient for tooth extraction, is from the physician yielding to the convenience of the dentist, and giving the drug while the patient is in the erect position. It is useless to attempt to disguise the fact,—*all anesthesia, from whatever anesthetic, is dangerous*, and the doctor is only properly armed for the administration of any anesthetic, who is properly impressed with this belief.

An account of 393 deaths from the administration of chloroform, and 27 from ether, and eight from nitrous oxide, are given in detail. Of course this represents only a small portion of the deaths from these causes, but the record is an instructive one, and will be convenient ammunition for the partisan warfare on the subject which promises to be interminable.

Alcohol and chloral hydrate have been included among the anesthetics and are discussed at length.

We must close this already too lengthy notice. We have been led by the great importance of the subject to interest our reader in this volume, because they will find it a very comprehensive resumé of anesthesia in general.

INDIGESTION, BILIOUSNESS AND GOUT IN ITS PROTEAN ASPECTS, Part I. INDIGESTION AND BILIOUSNESS. By J. MILNER FOTHERGILL, M. D. New York: William Wood & Co. 1881. Pp. 320.

Dr. Fothergill has long been a popular medical author in this country. His "Practitioner's Hand-Book of Treatment," and "Antagonism of Remedies," and various lesser contributions in the way of letters to the *Medical Times* have always found acceptance here. This volume is written in a popular style, and is easy and pleasant reading.

The physiology and digestion is first considered, which is followed by a chapter on *primary indigestion*, or the indigestion due to imperfect disintegration of food or defective solvent power. Then after discussing the suitable forms of food and tissue nutrition, he takes up *secondary indigestion*, or indigestion due to disturbances elsewhere [than in the stomach and duodenum], or to the presence of poisons in the body. Functions of the liver and liver disturbances extend over nearly 150 pages, the volume concluding with a chapter of "The Failure of the Digestive Organs at the Present Time," and "The Failure of the Nutrition of Children."

We do not find in this volume the attractive original work which previously characterized the author's writings, but he has brought together the best practical thought of the best writers on physiology, and applied them to the needs of the practitioner.

We quote a paragraph which strikes us :

"If the curer, or thaumaturgus, believe not in the cure, he cannot inspire the patient with faith. If the medical man speak to the patient with doubtful accents and hesitating utterances, he does not inspire confidence; he really sows distrust. This is the explanation of the successful treatment of a case by one man, when another has failed; the remedial measures being much the same. The one carries the patient with him to the restoration of health; the other intensifies a morbid state, and tends to make it permanent. This is a matter too little thought about. Just as a weak-willed man fails to do certain patients good, and a lack of decision of character unfits a medical man for dealing with emergencies, where the judgment must be prompt, and the action energetic; so the therapeutic nihilist, who doubts the efficacy of drugs, and leaves the patient to nature, disheartens many patients, and leaves them chronic valetudinarians, when in the hands of an enthusiast, the cases would soon move onward to a satisfactory termination. There are some men who are "doubting Thomas'"; there are others who decry what they do not understand, and depreciate remedies with whose potency they are unacquainted, who do infinite, immeasurable harm to their patients. An eclipse of faith in medicines has now existed sometime; but the darkness is beginning to move away, and a return of faith, stronger, firmer, more capable of giving a *raison d'être* for its existence, than in the past, is dawning,—

the daybreak of happier times, for those who are stricken down with illness, or crippled in their working power by incapacity in their digestive viscera. This therapeutic nihilism is a passing wave of opinion, a temporary mental state, the end of which is at hand, and the sooner it is over the better for all."

The striking part of this work is the great care which has been taken in applying physiological knowledge to the use of the practitioner, a task not so easily performed, as but few physiologists are practicing physicians and the converse. It is this special talent which has given Dr. Fothergill so high a stand as a writer on therapeutics. He succeeds in imparting his faith in remedial measures to his readers, mainly by the pleasing manner in which he writes. No works are as easy to read as his; in fact, we realize the sort of pleasure which we got out of Darwin's *Zöonomia* when it was a fashionable text-book, but decidedly more instruction.

The chapter on "Functions of the Liver and Liver Disturbance," will greatly interest Southern practitioners, for nothing so good on the subject has appeared since Murchison's excellent "Croonian Lectures" on the same subjects.

THE CHEMISTRY OF MEDICINES, PRACTICAL. A Text-Book and Reference Book for the use of Students, Physicians, and Pharmacists, etc. Second Edition. By J. U. LLOYD, Prof. Chemistry and Pharmacy Eclectic Medical Institute, &c. Cincinnati: Robert Clarke & Co. 1881. Pp. 451.

Prof. Lloyd has produced a useful and instructive book up to the times in everything. It was designed to include all the organic and inorganic chemicals employed in medicine, and which may be required of pharmacists. These chemicals are practically investigated, as well as the processes by which they are made. The principal adulterations and impurities are named and the tests given for their detection. Poisons are specified, and with each noxious article the treatment and antidotes for injurious doses.

Most of the new medicinal substances introduced recently, are carefully described, with enough of the chemistry of their production and reaction for practical purposes; and Prof. Lloyd having a rare experience in well-known "Eclectic Remedies," brings together much information, commercial and chemical, not ordinarily found in the Dispensatories.

The student will find practical instruction for laboratory work, and enough of chemical theory to serve him, although as the author suggests, separate treatises should be consulted for instruction in the phenomena of heat, light and electricity.

Throughout the book there are practical hints about the commercial sophistication of medicines in common use. For example : "The spirit of nitrous ether of the market is very unreliable, larger amounts of it being being mixed with water and sold under the names of ' 4 F and 3 F spirit of nitre,' the first term seems to signify *water*, the second, *more water*. If a pure solution of nitrous ether in alcohol be mixed with its bulk of chloroform or castor oil, the result will be transparent and colorless. If the watery mixture be tested in the same manner the result will at first be milky and then two layers will form." Pp. 366.

The volume closes with the "Chemical Examination of Urine."

WATER : ITS COMPOSITION, COLLECTION AND DISTRIBUTION. A PRACTICAL HAND-BOOK FOR DOMESTIC AND GENERAL USE. By JOSEPH PARRY, C. E. With Illustrations. London : Frederick Warne & Co, Bedford St., Strand. Pp. 184.

The water supply is becoming a question of some importance in North Carolina towns. Two of our towns, Charlotte and Wilmington, have water works in process of erection, and in both cases the question of the source of water is a difficult one. This book will be of some service to those who are seeking after more light on the subject, as it treats of the composition of water and sources of water supply, pointing out what pure water is, the safe sources of it ; the value of rain water ; standards of purity ; effect of water supply on mortality ; diseases communicated through water ; microscopical examinations ; physical tests ; hardness of water ; the softening process.]

Further on the distribution of water is considered, also the water rates, and the appliances for domestic purposes ; cisterns ; rural water supply ; roof-water, &c., &c. Although the volume is written for the inhabitants of London especially, its general principles apply or will apply to us before we have gone far in our experience with water works.

So far, in every town in the South where water has recently been

introduced, the commercial element of the transaction completely overshadows the scientific suggestions as to the sources of water. Mistakes are with difficulty corrected, and it would be well everywhere to make haste slowly in the selection of water. Every treatise like this one is valuable to the honest enquirer.

THE WILDERNESS CURE. By MARC COOK.

This little book is the story of the personal experience of a consumptive in the Adirondack Wilderness. It first appeared as a magazine article, but was afterwards collected in this form. It is the record of a plucky newspaper man who determined to fight down his cough by living in the open air. His book has enticed many into the Adirondack Wilderness, and many in the most forlorn and helpless state have died there. The author unfortunately, too, has died since this book was issued.

The Camp Cure in a certain number of well selected cases will succeed beyond expectation, and deserves to be tried perseveringly. Its value was shown in the late war, in the cases of several young men coming under the eye of the writer, who fought down phthisis by living in camp and undergoing its hardships.

Of course there will be a craze on the subject at first, but experience will after awhile determine the class of cases best suited for this treatment, and common sense will easily dictate the details of camp living.

THE MOTHER'S GUIDE IN THE MANAGEMENT AND FEEDING OF INFANTS. By JOHN M. KEATING, M. D. Philadelphia: H. C. Lea's Son & Co. 1881. Pp. 118.

This is a thoroughly sensible book, written with scientific care, but in language untechnical and simple, and even forcible, so that it is a work entirely safe to be entrusted to the mother. Such a work greatly aids the doctor in his directions for the nursing of sick children, and we heartily recommend it for liberal distribution.

For orthopnoea due to defective heart-action, free purgation, with the hourly administration of digitalis and nux vomica, is recommended by Dr. H. Cook.—*Practitioner*.

CURRENT LITERATURE.

BILIOUSNESS.

Dr. Roberts Bartholow in a critical analysis of Dr. Wickham Legg's work "Bile, Jaundice, and Bilious Diseases," in the *American Journal of Medical Sciences* for October, has the following :

As the subjects of biliousness, so-called, and the action of cholagogue medicines, are important practical topics in this country, especially through the west and south, it may be desirable to develop at this point, the real state of scientific opinion on these questions. Dr. Legg devotes the last chapter of his work to "Bilious Diseases," but clearly, this department of the subject has close relation to that which we are at present considering, and may therefore be appropriately taken up now. The existence of bilious diseases, and the belief in biliary derangements, in too little or too great supply of bile, are deeply rooted in the convictions of men, and have been, from the time of Hippocrates, in whose system various kinds of bile played an important part. Bartholin was the first of the modern school to dispute the Galenical views. But, as has been pointed out, the reaction has gone out in the opposite direction, and now various conditions of the bile are in common professional and popular belief, influential agents in disease production. The swing of the pendulum of professional beliefs is again starting away from this point, and the "bilious state," and "biliousness," are strongly doubted as morbid entities by the new school of physiological physicians. Frerichs treats of hyperæmia of the liver due to gastro-intestinal catarrh, but we do not find in his work any references to the functional disturbances of the liver such as in England and in this country are supposed to exist under the term biliousness. Murchison, in his very suggestive and interesting Croonian lectures, holds to the belief in such derangements. A large portion of the physicians in this country, especially those practising in malarious regions, are unquestionable believers in biliousness, as a distinct morbid state. Our author, Dr. Legg, maintains, that "there is no evidence that the disease is accompanied by any increase or decrease, or any change whatever, in the secretion of bile." His view, that the condition is really gastro-

duodenal catarrh, is probably correct in large part ; but not every case of this kind is accompanied by a muddy complexion, yellowness of the sclerotic, and light-colored stools, indicating biliary derangement. There are two forms of the condition, then—one limited to the gastro-duodenal mucous membrane ; the other accompanied by signs of biliary derangement, and therefore, doubtless, extending to and involving the orifice of the *ductus communis choledochus*. In the latter sufficient swelling of the mucous membrane about the orifice of the duct exists, to hinder, to a greater or less extent, the escape of bile into the duodenum, although not to prevent it entirely. During many years of practice in malarious localities, the reviewer saw numerous examples of this form of gastro-duodenal catarrh, or biliousness. When, in such cases, the whole tract of the hepatic duct is involved, we have the well-known catarrhal jaundice, which, for obvious reasons, is much less apt to occur than catarrh limited to the duodenum. By Murchison symptoms of the same kind are referred to *lithæmia*, that is, imperfect oxidation, the accumulation of uric acid and urates in the blood, and their excretion by the urine. Murchison admits that “these symptoms are the more likely to occur if the patient be what is commonly known as a ‘generous liver,’ if he takes little exercise in the open air, or if he have much mental work.” The complexus of symptoms, given by him, are those of gastro-duodenal catarrh, and he enumerates amongst them, weight at the epigastrium, flatulence, heart-burn, a furred tongue, metallic taste, headache, change in the color of the stools, etc. It can scarcely be doubted that Murchison has ascribed to lithæmia the symptoms belonging to gastro-duodenal catarrh, and that he confounds effects with causes. The final conversion of nitrogenous material into urea, is the work of the liver, it is true, probably, but when gastro-duodenal catarrh exists, the peptones are imperfectly prepared, and here is the first step in the morbid process.

As far as the condition of biliousness is concerned, the change in the color of the stools is eminently characteristic and can be referred to the absence of bile.

Next to the belief in the existence of biliousness as a distinct morbid state, is the conviction of a large portion of the medical profession in Great Britain and this country, that mercurials, par-

ticularly blue pill and calomel, are especially effective in removing it, and restoring the normal. No point in therapeutics has been more fully discussed, and hence, it deserves careful consideration at our hands. The evidence that calomel and blue pill do not increase but diminish the secretion of bile, has already been placed before the reader. But two facts directly bearing on the question at issue, are now well-established; the stools are changed in character by mercurials; the symptoms of biliousness, or gastro-duodenal catarrh, disappear under their use. If these remedies then, do not act on the liver, how explain their good effects? We believe, and have of late years taught, that the explanation is as follows: The color and odor of the stools begin to have their usual characteristics in the lower part of the ileum and especially in the cæcum. Mercury increases the activity of, and is largely eliminated by, the enormous glandular apparatus of the ileum and cæcum, and to this action is to be referred the change in the color of the stools. Small doses of calomel (1-20th to $\frac{1}{4}$ grain) have a remarkably sedative effect on the gastro-intestinal mucous membrane, just as powdered calomel will allay an inflammation of the conjunctiva. Other remedies act favorably—the salines for example—and all the world knows the good effects of a rigid diet and of abstinence. Since his demonstration of the cholagogue action of euonymin, Rutherford speaks in behalf of a dose of this substance at bedtime and followed by a saline in the morning.

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TRADE-MARK PHARMACALS.

We have not troubled our readers with the earnest discussion which is now going on, as regards the ethical principles involved, on the one hand by druggists and manufacturing pharmacists putting on the market preparations which are sold under copyright names, and on the other hand, of physicians using and prescribing medicines so protected.

We give in this issue one phase of the question, in justice to Messrs. Parke, Davis & Co., the trustworthy and liberal pharmacists of Detroit, and hope to say more on the subject in advance of its discussion by the American Medical Association at St. Paul's.

"In illustration of the dangers that may arise to the science of medicine from the encroachments of trade is seen in the case of the drug, or compound, known as 'Tonga,' legal proceedings in relation to which are now pending in the courts at Detroit. This drug attracting the attention of Drs. S. Ringer and Wm. Murrell, of London, as a reputed Fiji Island remedy for neuralgia, was investigated by them, and the results of their investigations published for the benefit of science in the London *Lancet*. Drs. Ringer and Murrell's article created more or less interest in the drug in medical or pharmaceutical circles in America, which induced Messrs. Parke, Davis & Co., of Detroit, to dispatch a special agent to the Fijis to secure a supply of the genuine article for use in this country. After going to this trouble, and to the additional expense of placing it in the hands of the profession quite generally throughout the country, and donating generously to the hospitals for careful clinical test and report, a moderate demand sprang up. Before, however, the investment had become a paying one, and at this late date, an English house, Messrs. Allen & Hanbury, step forward, and through their agents, Messrs. Schieffelin & Co., of New York, institute legal proceedings against Messrs. Parke, Davis & Co., for what they claim is infringement of their trade-mark. It seems that Messrs. A. & H., have registered the name 'Tonga' as a trade mark on the drug Tonga, and seek to gain an unlimited monopoly of the manufacture and sale of the article by means of this 'trick of the trade.' This 'trick,' however, is well-known in case of the so-called 'patent medicines,' where the

name of an article is claimed as its trade mark. The principal argument against the 'Patent Medicines' is, not that they are patented, for this is rarely the case, but the danger to science, and to a scientific profession, accruing from the system of unlimited control by which the proprietary medicine business seeks to lock up all knowledge of composition, and by creating an artificial demand through unscientific advertising to compete in such an unfair manner, with the medical profession. The case of 'Tonga' looks very much like a trick of the nostrum ring to persecute Messrs. Parke, Davis & Co., because of their well-known antipathy and telling strokes against this abuse of the trade mark law. It is to be hoped that the efforts of this house to put pharmacy on a scientific basis will be properly appreciated by the profession.

THE PATHOLOGY OF PSORIASIS.

Dr. George Thin, in a paper on this subject, describes the naked-eye appearance of a patch of psoriasis. White masses of epidermic scales cover a reddish vascular base, and if the scales be removed by the finger nails, blood oozes from the vascular surface. This proves increased vascularity of the papillary layer of the skin, a morbid formation of epidermis over the papillæ, and also that the healthy rete mucosum is deficient, for, when healthy, that membrane protects the vessels of the papillary layer from slight injury as suffices to cause bleeding from a patch of psoriasis, and gives reason for believing that the morbid changes in the epithelium cause the inflammatory condition beneath it. Shortly expressed, histological analysis has carried us thus far. A diseased condition of the epidermis at certain localized points leads to inflammatory changes in the subjacent vessels. The serous effusion which takes place from the injured vessels, breaks down the diseased epithelium, and leads to the formation of a papilla. At the same time, whilst the apex of a papilla is being thus excavated, a new formation of epithelium takes place at the side of the new papilla, and by growing downwards, the papilla becomes longer. The exudation from the vessels

favors a rapid formation of cells in the rete mucosum ; but these cells, from a defect, the nature of which is not understood, do not go through the normal changes by which the horny layer is formed, but is thrown off whilst the transformation is incomplete. In persons subject to psoriasis, very slight injury to the epidermis, from a scratch, etc., sets up the specific morbid action, and produces a patch. Unlike certain other diseases, the inflammation caused by the presence of the morbid epithelium, is not sufficiently intense to destroy the morbid influence, and thus effect a cure. But inflammation can be artificially raised to an intensity great enough to destroy that specific morbid condition. This is the signification of the cures effected by Goa-powder, tar, etc., but for the desired purpose Dr. Thin prefers pyrogallic acid.—*British Medical Journal*.

RESPONSIBILITY.

A blessing at any time, but specially now, when the medical profession are often made to bear the blame for the use of vile nostrums advertised over their recommendations. Dr. T. A. Ashby, editor of the *Maryland Medical Journal*, Baltimore, Md., writing, says that he has thorough confidence in the Powell Manufacturing Co., of that city, Manufacturers of the POWELL'S BEEF, COD LIVER OIL AND PEPSIN, (a superior tonic, nutritive and digestive), when they say they will give their preparations exclusively to the profession, and will not advertise it as a patent medicine. To quote Dr. Ashby's exact words, "I am well acquainted with Mr. Powell, and know him to be a conscientious and upright gentleman, and perfectly square in his dealings and truthful in all his statements. He will make no representation which is not backed by facts.—*Journal*."

AMERICAN PUBLIC HEALTH ASSOCIATION.

Following the mistake of the Southern Medical Record, we fell into the error of giving the wrong date for this meeting. The proper date is November 29th and the place of meeting Savannah.

OBITUARY.

J. B. SEAVY, M. D.

This venerable practitioner died at his home in Sampson county on the 5th inst. He was a native of Rochester, N. H., coming to this country when quite young, to take shipping to the West Indies for his health. Finding the climate to agree with his pulmonary disease, he made his home in North Carolina. He was a man of very superior education and fertility of resource, as a practitioner. He was particularly versed in therapeutics of native drugs, and made use of the materials at his hands with skill and success.

He attained a high rank in all his private professional relations. He was as intensely a North Carolinian in his affections as a native could possibly be, and the sweet aroma of his benevolent life is a more enduring monument to his memory than any poor tribute of an eulogy.

BOOKS AND PAMPHLETS RECEIVED.

The Physician's Visiting List for 1882. Thirty-First Year of its Publication. Philadelphia: Lindsay & Blakiston.

The Dangers and Duty of the Hour. By William Goodell, A. M., M. D. Reprint Trans. Med. and Chir. Faculty Maryland. 1881. Pp. 17.

Annual Report of the Health Department of the City and County of San Francisco for the Fiscal Year Ending June 30th, 1881. San Francisco: 1881. Pp. 127.

Antiseptic Surgery. The Principles, Modes, Application, and Results of the Lister Dressing. By Dr. Just Lucas-Championnière. Translated and edited by Frederick Henry Gerrish, A. M., M. D. Portland: Loring, Short & Harmon. 1881. Pp. 240.

The Principles and Methods of Therapeutics. By Adolphe Gubler, M. D. Translated from the French. Philadelphia: D. G. Brinton, 115 South 7th Street. 1881. Pp. 446.

Artificial Anæsthesia and Anæsthetics. By Henry M. Lyman, A. M., M. D. New York: William Wood & Co., 29 Great Jones St. 1881 September Number Wood's Library of Standard Medical Authors. Pp. 337.

Water: Its Composition, Collection, and Distribution. A Practical Hand-book for Domestic and General Use. By Joseph Parry, C. E. With Illustrations. London: Frederick Warne & Co., Bedford St., Strand. Pp. 184.

Compendium of Microscopical Technology. A Guide to Physicians and Students in the Use of the Microscope and in the Preparation of Histological and Pathological Specimens. By Carl Seiler, M. D. Philadelphia: D. G. Brinton, 115 South 7th Street. 1881. Pp. 130.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 5. Wilmington, November, 1881. Vol. 8.

ORIGINAL COMMUNICATIONS.

CLINICAL LECTURE ON SURGERY.

By R. A. KINLOCH, M. D., Professor of Surgery, Medical College,
State of South Carolina. November 16th, 1880.

Reported by THEODORE N. DUBOSE, Medical Student.

GENTLEMEN:—I call your attention this morning for the first time, to the subject of stricture of the urethra. It will require much more time than can be put into one lecture to give you some idea of it; but as I have two or three patients serving to illustrate the subject, I will begin by defining stricture to be an organic narrowing of the urethral canal. Some surgeons speak of spasmodic stricture, caused by the contraction of the muscles which surround the membranous portion of the urethra, but it is not my object to allude to this at present. Organic stricture may be due to a thickening of the mucous membrane of the urethra, or the result of inflammatory action affecting the mucous membrane and the sub-mucous tissue of the urethra, and nine times out of ten, it can be traced back to gonorrhœa. Again, sometimes due to traumatic injury—as a kick, or a man may be thrown violently against the pum-

mel of the saddle, or fall astride a spoke of a ladder—acute inflammation follows, and then chronic change and stricture is the result. Again, the passage of acrid urine over the mucous membrane of the urethra may cause, finally, stricture. The narrowing may be at one or at several points along the urethra, certain parts, however, are more liable to stricture than others. The stricture may be at the “meatus” but more apt to be about four or five inches from the meatus, or again, just where the “bulbous” and “membranous” portion of the urethra join. This, in my experience, is the most common seat of stricture. Some surgeons state that they have found fourteen strictures between the meatus and the neck of the bladder. This may be so, but it is rare to find more than three or four. I have found as many as five or six.

‡*Symptoms.*—Sometimes the patient experiences a burning sensation in urinating, or a tickling sensation; he finds that he has more frequent calls to make water, and after a time the stream becomes less and he finally loses the power of expelling the urine. Or, he has congestion, the result of cold or wet, supervening upon an old narrowing and he cannot pass his urine even by drops; there is “retention” and the surgeon has to interfere. The true way to detect stricture is to explore the urethra with certain instruments—sounds, bongies, catheters—as they are called—and by so doing you can tell just where the stricture is. This man complains of irritability about the urethra, and experiences difficulty in passing his water, and upon examining him on yesterday, I found that he had a stricture. In introducing sounds you best begin with a good-sized one—about number six or seven English or eight or ten French, for with a small one, like a small probe, you may make an opening or false passage, and thus injure the urethra. Always oil your sound before introducing it. This patient has a very small meatus, and my friend, Dr. Otis, of New York, says that the size of the meatus and of the urethra corresponds to the size of the penis—if the penis is small—the calibre of the urethra is small. An instrument that will pass the meatus, the smallest part of the urethra, will generally go through the whole canal, provided, of course, that there is no stricture. When I introduce this sound, I see it is arrested, and by measuring, I say that the stricture is such a distance from the meatus, I will now

explore the urethra with this small rubber bougie, having a bulb at one end. One advantage of this instrument is that it can do no harm. I introduce it and you see it is arrested at the same place, and I have here, at present, no smaller instrument with a bulbous extremity, but I know, from my examination on yesterday, that this instrument which I hold in my hand will pass the stricture. I have used no force and yet you see the urethra is disposed to block. Sometimes your instrument lodges in one of the "lacunæ" of the urethra. In this case you withdraw the instrument change its direction somewhat, and then gradually pass it on into the bladder. I have the instrument now in the bladder. But the "catheter" at times is better than the "bougie," because it has an opening to let the water pass through, and thus its position in the bladder is demonstrated. I withdraw the bougie and introduce a catheter, we see only a few drops of water coming through. The House-Surgeon tells me he has just drawn off the water, so this accounts for it. We will retain the catheter in the bladder by employing a strip of adhesive plaster around the penis, the end of the catheter being connected with the plaster by means of two pieces of thread. We thus begin treatment by continuous dilatation about which I will have something more to say by and by.

We have another patient to bring before you. I have not examined him yet, but learn that he is affected in the same way as the man we have just examined. The urethral canal is very sensitive in some individuals, but in this case I think the man is frightened, and that our examination does not hurt him so very much. I have seen men faint from the introduction of the catheter, they being in the upright position—so always make your patient lie down at the first examination at least. I now introduce this instrument and I find that it is arrested about the junction of the bulbous and membranous portion of the urethra. Strictures generally exist here, and very seldom, if ever, in the prostatic portion. If introducing a soft instrument, you find it arrested, withdraw it slightly and turn it half-way round, but never use force. We have tried all of the instruments at hand and have come to a filiform bougie, made of whalebone. With this instrument we have a little more power. This is a pretty narrow or "close" stricture. When the opening is large we speak of it as an "open stricture" or, in other words, we

have strictures of "small" and "large" calibre. You can bend or curve the end of this filiform bougie in any direction you please, and sometimes you facilitate the introduction of this by injecting oil into the urethra. You notice all the instruments I have tried are arrested at this point and I think it likely we won't get any instrument through. Sometimes by placing the patient under chloroform you can pass a stricture, on account of the relaxation of the muscles or the obstructing of reflex action. This instrument has gone in quite far, yet I don't know that it is in the bladder. It is evident that it is grasped by the stricture, for when I try to withdraw it, I find it held fast. I will now gently force in another filiform bougie along side of this one and leave both of them in. In the course of a few hours I will direct them to be taken out, and an elastic catheter of suitable size be put in their place, ten chances to one we will get the catheter in, for these filiform bougies will dilate the stricture considerably. As soon as we can get a catheter into the bladder, a great point is gained, and we have the case under our control. The treatment by continuous dilatation consists in passing in a small bougie, and then increasing the size of the instrument every six or eight hours as the stricture is opened. This may be carried on for three or four days, seldom longer, for the irritability of the canal will become too great. The *intermittent* dilatation consists in inserting the bougies every other day, and withdrawing them after a few minutes. These are both admirable plans of treatment, and if your patient can stand the former I advise you to adopt it in all tight strictures. Sometimes he will have urethral fever, and then you have to discontinue this method by continuous dilatation and wait until he is well again. Before resorting to any more serious operations in the urethra I generally keep the patient in bed for three or four days and give him 5 grs. quinine and gtt. v to gtt. x of muriate tincture of iron, three times a day, and thus prepare him for the shock of the operation. But as my hour has passed, we will discontinue the lecture and when we next meet, perhaps we will operate in another way on the cases you have just seen.

SEVENTH CLINIC—NOVEMBER 10, 1880.

I am sorry that I am deprived of showing you one of the operations that I intended to perform this morning. You remember the

white man I brought before you at my last clinic with a stricture of the urethra. I intended bringing him before the class this morning and decide what treatment we would adopt, whether that of intermittent dilatation, or perform internal urethrotomy. But a few nights ago the man had a chill and on account of the irritation produced by the catheter, his temperature went up to 104° F. He has what we term "urethral fever," and, of course, the catheter had to be removed. His temperature is still as high as 101° F., so it is out of the question to bring him before the class. I am treating him for the fever, give him a purgative to open his bowels and frequent doses of a sedative mixture (one-eighth of a grain of morphine and from three to five gtt. of Fleming's tincture aconite at a dose) and in a few days he will most likely be in a condition for operation.

Dr. Otis has invented this instrument for ascertaining the calibre of the urethral canal, it is called the "urethrometer," and consists as you see of a thin metallic tube, eight inches in length, at one extremity of which are a number of springs which are made to clongate or to bend and shorten in obedience to the turning of a screw at the handle. The degree of expansion or contraction is indicated on a dial arranged for this purpose. This instrument is inserted into the urethra and is dilated by turning the screw at the handle, until the patient complains of pain. We then read off the number indicated by the index needle on the dial plate and we have the calibre of the urethra. Before operating, examine the natural calibre of the urethra, for our aim in treatment is to restore the natural calibre. With this instrument, the dilator of Sir Henry Thompson, of England, I can also dilate the urethra. It consists of two blades joined at either end, and can be separated at an intervening point by turning a screw in the handle, an index serves to show the extent to which the expansion has been carried. But with the above instrument we cannot use much force. This instrument which I hold in my hand, is one of my own invention, and it is used when I want to dilate more forcibly. It has the great advantage of dilating only the seat of stricture and not the whole of the urethral canal as most of those kind of instruments do. We sometimes dilate with conical sounds or we use one of the more powerful divulsors. I am rather opposed to these powerful

instrument for they damage the urethra, lacerating it in many places, and there is much more danger from urethral fever than when you use the clean cutting urethrotomes. Some surgeons claim that there is less danger from hæmorrhage when you use the divulsors, and this is the fact, for we know that there is always less danger of hæmorrhage from a lacerated than from an incised wound. But the hæmorrhage is easily controlled by passing in a large sound, so I advise the use of the clean cutting instruments. The urethrotomes when passed so as to cut from before backwards, are very dangerous, you may cut wide of the canal. So I advise you to dilate the urethra to such an extent that you can pass your instrument behind the seat of stricture, and cut as you withdraw it. It is best to cut the upper surface (unless at the meatus) of the urethra, as the danger from hæmorrhage is less, but if the stricture is very narrow and your incisions slight, turn your instrument and cut below or laterally, as you think proper. I showed you the filiform bougie at my last clinic, and I have here an instrument something on the same principle having a wire passing through the extremity and you can generally pass the stricture with this wire and then you can dilate it gradually. This instrument, the "dilating urethrotome," of Dr. Otis, first dilates the stricture and holds the canal firm and then cuts it by a narrow blade which runs in a groove along the upper arm of the instrument. Dr. Otis claims that the stricture is thus divided with the smallest possible incision and the least damage to the healthy tissues. When we fail to pass the filiform bougies beyond the stricture we have at times to resort to external urethrotomy without a guide. Or in other cases we pass a guide into the urethra. A deep incision is made in the middle line of the perineum, the back of the knife being towards the rectum. The point of the blade is introduced into the groove beyond the stricture which is divided as the knife is advanced. You see this man has a number of cicatrices upon the perineum, and I think this is a case of traumatic stricture with fistulous openings and not through the natural channel. He says he has been operated upon for stricture once before, but you see the condition he now presents, and if something is not done to give relief he will die; even now he has traces of albumen in his urine. I propose, this morning, to open the perineum behind the cicatrization and allow

the water to pass out, my object is to give him temporary relief, don't know that I shall do more to-day. I will try and pass in a filiform bougie to see how far it will go, you see where it is arrested. In the perineal section the "median line" is usually the guide, but in this case it is so twisted out of its position, that it will not serve us that purpose. I will cut through the perineum and when I get through the deep structures, if I can see the urethra, I will cut into it and perform external urethrotomy. This fistulous opening that I have my probe in, evidently opens into the urethra at some point. I now cut down upon the tissues and enter an abscess as you see by the flow of pus. I feel from time to time for my probe, so that I may know where I am. When you get down into the deep tissues, the best plan is to divide the urethra transversely, as you can very often see it when you would not if it was divided longitudinally. You see my probe comes through one of the openings. I will enlarge this. This shows we have struck the point where this fistula receives water from the urethra. I am now merely opening some blind passages which may enable me to reach the urethra. These tissues are so matted together, that it is impossible for me to tell whether I am cutting through the urethral tissue. When we commence an operation of this kind we don't know how long it will take us. I will now cut away this cicatricial tissue with my scissors. The deep part of the canal has been entirely destroyed and will have to be made over. We will enlarge this opening and pass the sound in by the bougie. If we can succeed in getting a catheter in the bladder, I will have accomplished much. In passing your instrument into the bladder, you derive much more important information by introducing your finger into the rectum, you can feel the prostate and it helps you in directing your instrument. We now have the catheter in the bladder, you see how the water flows out. I will not leave the instrument in the bladder, but allow him to pass his water through the perineal wound.

Simple Remedy for Chafes (Prof. H. C. Wood).—Bathe the parts well in tepid water, dry well with soft cloths, and apply, by means of a soft sponge or cloth, the following:—℞. Zinci acet. gr. xv., morphiae acet. gr. ij., glycerin., aq. rosar., āā 3 ij. ; m. Apply to chafed parts twice or three times a day.—*Louisville Medical News*, September 10.

SELECTED PAPERS.

THE HEALING OF WOUNDS.

The treatment of wounds always occupies so large a share of the attention of every surgeon, that it was only meet that the several important questions in connection with it should have been freely raised at the recent Congress. The Surgical Section devoted a whole morning to the consideration of the means best calculated to secure primary union of wounds, and although there were some differences of opinion, in the main the old classical principles were reasserted. As in so many other cases, it is well to approach this subject through the study of the simplest cases. In the treatment of a simple cut of the finger, or after the operation for hare-lip, the essential principles to observe are to adjust as perfectly as possible the clean-cut surfaces, hold them in exact apposition, and keep the part at rest and free from all disturbance until union has occurred. A simple observance of these particulars is all that is necessary to obtain union by first intention, and every one of these is essential. If the surfaces are not placed in apposition, if they are not retained in contact, or not at rest, union by first intention does not occur. Now in all this we have not had occasion to say anything about germs, or sprays, or antiseptics. We suppose no one regards the one as dangerous or the other essential in treating such simple incisions; and Professor Lister has himself brought forward evidence to show that healthy blood-serum and blood-clot are not favorable nidus for the development of bacteria. We may advance further to large incised wounds, such as of the abdominal wall in ovariectomy, where observances of the same principles is sufficient to secure primary union. But if we go beyond this we reach cases of larger irregular wounds such as in an amputation, where the conditions are seriously modified. If we attempt to carry out the treatment on the same lines we are at once confronted with the circumstance that the *exact opposition* of the wound surfaces is impossible; the edges of flaps may be brought together and carefully united, but no suturing, be it ever so skilful, is able to place every portion of wound surface in close contact with some other portion of wound surface and retain it so. One of the necessary conditions for

primary union being wanting, failure results. As a consequence of this want of exact apposition, fluid accumulates in the spaces and interstices, and may so distend them as to irritate the nerves of the part and thus lead to inflammation, or may decompose and thus excite inflammation by its directly irritating properties, or being absorbed may lead to general blood-poisoning. In either case the wound fails to unite throughout by first intention. The difficulty thus raised has presented itself in various ways to many minds, and hence has arisen the divergence in practice. Some surgeons, such as Messrs. Savory and Gamgee, make it their aim to carry out the three cardinal principles of wound treatment as far as possible in these complicated cases, and then by simple means prevent the ills to which they are exposed. They urge that such wounds should be treated in a great degree like simple wounds; that the parts—not the edges alone—should be adjusted with the greatest care, and retained in that position, and perfect rest secured, while the fluid exuded into the unavoidable spaces should be drained off and received into some kind of dressing in which its decomposition is prevented. The special means used are pressure, drainage-tubes, and an absorbent antiseptic dressing. Another school of surgeons, while not professing to neglect the principles named, are yet so impressed with the evils attending the decomposition of retained fluids, and rightly tracing such decomposition to the influence of minute organisms introduced from without, that they concentrate their attention—in some cases their sole attention—upon the prevention of the access of these “germs” to wounds. Here, at once, two new elements are introduced. First, some agent has to be used which acts destructively upon the “germs,” and, as those germs are organic, they share to some extent the properties of all organized structures, and the strongest antiseptics are injurious in their action on the human body also. A very careful adjustment of means to ends is thus required, the imperfection of which has made us familiar with constitutional disturbance, amounting even to death, from the effects of the agent employed to ward off decomposition. The second element introduced arises from the fact that the effused fluids are organizable, and if preserved from contamination, even in large quantity, can organize and so cicatrize a wound. In one particular the divergence in practice has recently become greater,

for while the one school of surgeons look upon primary union of a wound as the surest safeguard against septic mischief, the other school, confident in its own power of preventing septic mischief, will forego the primary union of a wound in attaining this end. The difference between the two parties may, indeed, be roughly expressed thus, that while the one, confronted by the complex conditions, proceed as far as possible along the lines observed in the simpler, the other attacks them by entirely novel methods. We say "roughly" advisedly, because as was pointed out in one of the recent debates, where primary union is achieved, sepsis is prevented by that very condition. Which of these two lines of practice will ultimately prove the more successful it would be foolish and useless to attempt to predict. At present the general statistics of the one bear comparison with those of the other, and it may be that each will have to accept a part of the other, or seek its aid in certain classes of cases.

We have of course, been referring to so-called "Listerism," but we have purposely avoided using that name, and one reason for so doing is that it is unjust to so great a man to use his name in connection merely with a special means of dressing wounds. We consider Mr. Lister's work as far too great to be narrowed down to a mere matter of spray and gauze. It is not a mode of dressing wounds that he has introduced, but a surgical revolution that he has accomplished. There is not a hospital in the whole civilized world that has not been affected by his teaching and labors, even if a spray, or gauze, or even carbolic acid have never been found in its wards. He has gone far towards abolishing suppuration, and taught us all to consider it a preventable accident in the healing of an operation wound. And it is to him above all others that we owe it that septic diseases are generally held to be avoidable, and their occurrence a serious reproach. His work, in fact, has been far greater than the perfecting the form of dressing that bears his name, and he can fairly count among his disciples many whose outward ritual differs *in toto* from his own.

It is interesting to notice the development which the antiseptic method of dressing wounds is undergoing. Carbolic acid has evidently had its day; the cause of immense good, its use has yet been attended with such inconveniences, and in some cases, peril, that it

has been, or shortly will be, replaced by other and safer means. The spray, which by some has been considered one of the pillars of the system, has been abandoned by many of Mr. Lister's most ardent followers, and he himself has spoken of it as likely to become unnecessary. The gauze, too, is being replaced in some hospitals by more absorbent, softer, and more elastic materials ; so that Esmarch—an antiseptic surgeon whose brilliant statistics would be incredible from any less trustworthy source—dresses his cases far more after the fashion of Mr. Gamgee than that of Mr. Lister, and has shown that the transition from one to the other is neither difficult nor illogical. We cannot doubt that, amid all this development and change, surgery is advancing, and truth is being preserved ; and Mr. Lister is far too wise a man to think that finality has been attained in the so-called “Listerian” dressing. Side by side, however, with this development another fact is prominent. Our hospitals, previously dirty, have become clean ; surgeons, before too careless, are now scrupulous in their attention to cleanliness in all its details. And, as Mr. Lister himself says, it is “bits of dirt” that do the harm. Is it that his crusade has to a very large extent—would we could say entirely !—prevented these “bits of dirt” from being deposited on or in wounds, and that so previously necessary antiseptic precautions are now dispensed with in safety ? Or did his earlier teachings err in considering the invisible floating particles in the air as more dangerous than they really are ? Whatever may be the truth in the matter, it seems plain that the great lesson of antiseptic surgery has been widely learnt, and bids fair soon to be universally mastered. We now want to assign it its proper place in the management of wounds as, one of the elements—not the sole—to be considered by the surgeon ; and it will not be surprising should the next few years witness a great simplification of its details as a juster conception of its influence and worth is attained. The danger has been that the “system” should blind some of its followers to the fact that Nature works along certain lines or according to certain principles, all of which must be understood by the successful surgeon ; and surely when primary union of a wound is dispensed with in order that the “system” may be carried out, this danger has become real indeed !—*London Lancet*.

FATTY HEART: ITS DIAGNOSIS, PATHOLOGY AND TREATMENT.

Our knowledge of the disease termed fatty heart cannot be said, more especially as to its diagnosis and treatment, to be of a very definite or satisfactory character. Hence as a basis for farther advance we are disposed to welcome the *resumé* of its diagnosis, pathology and treatment given by Professor Stoffella, of Vienna, in a lecture recently published (*Wien. Med. Wochenschrift*, 1881, Nos. 26-28).

After distinguishing between fatty infiltration—which Dr. Walshe calls “local obesity” of the heart—and fatty degeneration, or the precipitation of fat within the primitive fibres, which latter alone he means when he speaks of “fatty heart,” Professor Stoffella goes on to say that the diagnosis of the disease, except in its immediate beginnings, is by no means specially difficult. He lays especial emphasis on the weak and usually toneless character of the heart-sounds, combined with the presence of the usual causes of fatty degeneration of the heart. He also notes the weak or imperceptible heart’s impulse, the weak compressible pulse, usually intermittent, irregular, and slow. Dyspnœa, permanent, or spasmodic, and frequent syncope, with the absence of valvular or pulmonic disease, also assist in the diagnosis. He fails to comment on the relative pulse and respiration rate, which Dr. Walshe has found in some cases 2 : 1 ; nor does he mention the valuable, while not, as was at first thought, diagnostic, symptom of the “Cheyne-Stokes’ respiration.” We fear, however, that notwithstanding all known aids, the diagnosis of this disease will in many cases be unmade, or, if made, will partake more of the character of a probable guess than a scientific conclusion. One of the grounds on which, as we have seen, Professor Stoffella base his diagnosis, is the presence of the usual causes of fatty degeneration. But while, as we shall see, there is a certain amount of sure etiological ground, outside that lies a residue of cases in which, beyond the hypothesis of a hereditary tendency, we must acknowledge ourselves ignorant of the cause of fatty metamorphosis of the heart-fibres.

In discussing the pathology of fatty heart, Professor Stoffella commences with some account of the physiological deposition of

fat. Twenty years ago, Volt and Pettenkofer showed that the direct source of the fat in the body is not the carbo-hydrates, starch, sugar, etc., but albumen. The overplus of albumen left circulating in the blood or other fluids of the body, after deduction of that used in tissue-formation, is broken up into water, carbonic acid and, fat, while, so far as it is perfectly oxidized, it leaves the body as urea and uric acid. The amount of fat deposited will therefore depend on (1) the amount of the "circulating albumen" and (2) the small relative supply of oxygen. As to other sources of fat, it is at least doubtful if gelatine forms fat, and of ingested fat only stearin, palmitin, and olein—the varieties naturally present in the body—go towards the production of fat. While, however, albumen is without doubt the direct source of fat, it is a manifest fact that gelatine, fat, and the carbo-hydrates help the production of fat in the body. This they do by oxidizing and splitting up more readily than albumen, thus using up the available oxygen, so that albumen is oxidized simply to fat, in place of to water and carbonic acid. By their oxidation, also, the carbo-hydrates spare the fat of the body, while, according to Voit, gelatine saves the blood and and tissue albumen.

Parenchymatous fatty degeneration is fundamentally the same process as the physiological formation of fat—that is, the albuminous contents of cells imperfectly oxidized deposit fat granules as a part of the process of destruction, morbid or natural.

Fatty heart is thus, Professor Stoffella says, the expression of a disturbance of nutrition, either purely *local*, as in disease of the coronary arteries or advanced fatty infiltration of the heart, or *general*, as in anæmia and chlorosis, in alcoholism, Bright's disease, the acute exanthemata, and all marasmic diseases. How comes this about? Two sets of experiments help us here. First, Dr. Litten has shown the muscles of guinea-pigs kept for a lengthened period in a high temperature undergo fatty degeneration—first the heart, then the respiratory muscles, accompanied by changes in the blood corresponding to those in typhoid fever. Again, various Continental observers have shown that if dogs and other animals are subjected to successive blood-lettings, fatty degeneration of the heart supervenes. The result is the same in both sets of experiments, therefore, and the common point between them is the pov-

erty of the blood in red corpuscles. But the red corpuscles are the oxygen-carriers of the body, therefore a deficiency of oxygen follows, resulting in an imperfect oxidation of the organic albumen in cells and tissues. The difference between the physiological and the pathological process is, that in the first the "circulating or store albumen" becomes fat, in the second the "organic or tissue albumen."

The treatment of fatty heart recommended by Prof. Stoffella follows as a natural corollary from what has just been said. Deficiency in the oxygen-carrying red corpuscles being the cause of the disease, our object is to stimulate the blood-forming function. Our most valuable agent for this is iron, and this must be used with perseverance on the part of both doctor and patient. Should the digestion be unweakened, the best preparation, according to Prof. Stoffella, is the sulphate of iron in the form of Blaud's pills. Niemeyer's formula for these is—*R.* Ferri sulph. pulv., potass. carb. pur. āā 3 ss., mucil. tragacanth. q. s. ft. mass. et div. in pil. xvi. Of these Professor Stoffella gives three thrice daily, immediately after meals, to prevent cardialgia. Should constipation be present, add jalapin or extr. aloes aquos. Where digestion is weak, Professor Stoffella recommends the milder pyrophosph. ferri et sodæ solutum. The iron treatment must be continued for several months, combined with quinine or extr. quebracho should the dyspnœa and chest-oppression be troublesome. When the degeneration occurs as a consequence of valvular disease he would also give digitalis or quinine. The alkaline mineral waters, mildly purgative and containing iron, usually benefit much. The diet ought to consist principally of lean meat, with green vegetables, bread, eggs, milk, rice, and a fair allowance of wine. All fats, potatoes, beer, brandy, etc., are to be excluded. The carbo-hydrates, fat, and gelatine must, however, be allowed in restricted amount, as otherwise, from the difficulty of oxidizing albumen, muscular reparation and animal warmth suffer. Also, nausea and disturbance of digestion result very soon from an exclusively flesh diet, as seen in the Banting cure.—*Medical Times and Gazette.*

WAGNER ON THE TREATMENT OF EMPYEMA.

Dr. W. Wagner, of Königshütte, in commenting on a case of empyema successfully treated by operation under antiseptic conditions (*Sammlung Klinische Vorträge*, No. 197), states that the treatment of this affection has now reached a fresh stage; and that, since the introduction of Listerism, an operation, instead of being a mere palliative measure, is to be regarded as justifiable under all circumstances, and, in cases of simple empyema at least as free from risk.

The surest way, Wagner asserts, of distinguishing an empyema from a simple pleuritic exudation, is to make an exploratory puncture. This may be done with a disinfected hypodermic syringe and trocar, or, better still, with a larger syringe, such as that used by veterinary surgeons, which holds about five grammes of fluid, and is furnished with a strong and large needle.* The exploratory puncture, however, does not always guard against errors in diagnosis. In the first place, a case may be met with in which there are two separate and distinct exudations, one a serous, the other a purulent exudation. Then, again, it may happen, especially in cases of exudation, originally serous or sero-purulent, that have become purulent, that the exploratory puncture, will give vent to serous fluid in the upper part of the collection and to purulent fluid below. In a patient lying constantly on his back, this precipitation will take place not to the inferior but to the posterior part of the thoracic cavity, so that serum will be present in front and pus behind. Dr. Wagner, though acknowledging that cases of this kind are rare, lays it down as a rule that, in every case of pleural exudation in which the general symptoms indicate empyema, several exploratory punctures should be made at different parts of the corresponding thoracic wall, should it happen that at the first or earlier punctures serum and not purulent fluid is withdrawn.

At the present day, no medical man believes in the possibility of the absorption of a purulent pleural exudation. The so-called 'natural cure', in which the pus is discharged through the air-passages, is of rare occurrence, and, when it does occur, is likely to have bad results, and to give rise to phthisis through the contact of the discharge with the lung-tissue or through its aspiration into the

fine bronchial divisions. Spontaneous discharge of an empyema through the thoracic wall cannot be regarded as a favorable termination, as it is often followed by an obstinate fistula.

In a case of well-marked empyema there is, in Wagner's opinion, an almost unconditional indication to operate at as early a date as possible. Unless the affected pleura covering the lung be soft and yielding, and the lung itself be capable of complete reëxpansion, the chances of a speedy and good cure will not be favorable. An acute pneumonic infiltration still persisting, whether in a high or low degree, should not prevent early recourse to operative treatment, for with removal of the empyema the pressure on the lung is removed. The organ is thus set free, and as its normal conditions of circulation become reëstablished, the absorption of the inflammatory exudation is favored. If the inner wall of the abscess be stiff and unyielding in consequence of thickening of the pulmonary pleura, then cure cannot be effected, speedily, and cannot possibly occur at all, unless the resistance of the thoracic wall or that of the tough pulmonary pleura can be overcome. Wagner sums up his remarks on this subject by stating that, when we operate in the early stage of empyema, we meet with the most favorable conditions for the reëxpansion of the lung, and for the approximation of the walls of the abscess. The older such an abscess, the thicker will be its walls, and the greater difficulty will there be in the obliteration of its cavity. In the application of the above rule, it is, of course, to be understood that the operation be performed under antiseptic conditions. Dr. Wagner is not in favor of treating empyema by simple puncture and aspiration. Such treatment may occasionally prove successful, especially with young children, in which class of patients there is likely to be a rapid reëxpansion of the lung after removal of the purulent fluid; but it is attended with this disadvantage, that, as it is almost always impossible thus to remove all the pus, there is likely to remain a small quantity of this secretion, the presence of which invariably causes a relapse of the empyema. The rule is laid down by Wagner that it is not justifiable to try puncture more than once in a case of empyema, and that, if this first attempt do not succeed, the surgeon ought without delay to have recourse to incision. The longer an empyema is allowed to run its course, the less favorable

become the chances of a cutting operation, and with repetition of simple puncture valuable time is lost.

Though an incision through the thoracic wall low down in the back of the chest may be most favorable for a full discharge during the operation, and in the course of the after-treatment, yet, Dr. Wagner holds, this situation can hardly be regarded as being under circumstances the best in the operation for empyema. The inferior and posterior part of the affected pleural cavity is often obliterated in consequence of plenrisy, and the space may be so contracted through approximation of the elevated diaphragm and the inner wall of the thorax, and also through reëxpansion of the lung, that free discharge of pus from the pleural sac is prevented. Dr. Wagner prefers an incision in the fifth or sixth intercostal space, near to the edge of the latissimus dorsi muscle; and in order to promote a free discharge during the after-treatment, he keeps his patient lying on the side, with the pelvis and lower part of the trunk elevated on a firm pillow.

In the cutting operation for empyema, Dr. Wagner recommends the administration of an anæsthetic. With anæsthesia, the surgeon is less likely to be disturbed through restlessness of the patient, and he may, if it be found necessary, proceed without delay to resect a portion of rib. Care, however, must be taken that the movements of the chest on the sound side are not impeded during the operation. Sudden death, which has occurred in some cases of empyema during operation, cannot, it is stated, be attributed to the anæsthetic. It has been due rather to some disturbance of circulation (thrombosis, cerebral anæmia, embolism of the pulmonary capillaries, pulmonary congestion, or œdema). These instances of sudden death have occurred as frequently during simple thoracentesis without anæsthesia, as in cutting operations for empyema.

The details of the cutting operation are very simple. The surgeon either makes an incision through the skin about two inches in length along the upper margin of a rib, and then slowly divides the muscles until he reaches the pleura which he opens with a small bistoury; or, following König's practice, he resects subperiosteally a portion of rib about one inch in length, and then opens the thoracic cavity by incising the posterior layer of periosteum and the pleura. This latter operation should always be performed when the

intercostal space is not of sufficient width to admit of the passage of a wide drainage tube. It is not likely to be attended with any bad result, and in some subjects the resected portion of rib is almost always wholly replaced.

During the flow of pus, which should not be allowed to take place too rapidly, the surgeon should carefully examine the fluid, and also introduce his finger through the opening into the pleural cavity, in order to ascertain the condition of the surrounding wall. He thus endeavors to make out indications for future treatment. If the purulent discharge be free from smell, and do not contain flakes, no injection need be made into the sac; but if, on the other hand, it be fetid, and be mixed with large and numerous fibrinous masses, then it is necessary to wash out the cavity. Dr. Wagner now uses in such cases a 7 per cent. solution of boracic acid. If the walls of the purulent sac be felt to be thick and rough, and if they be evidently covered by adherent masses of fibrine, then it is necessary to wash out the cavity thoroughly and repeatedly with strong antiseptic solutions, which, in order that chilling may be avoided, should be warmed before they are injected. It is advisable in dealing with such a condition, to make a second opening into the thoracic cavity.

When the pleural cavity has been opened, relieved of its purulent fluid, and washed out, or, as should always be done in simple cases of pyæmia and with children, has been simply emptied, a piece of drainage-tube of wide calibre, the length of which need not be more than two inches, should be inserted into the wound. Across this tube, near its outer extremity, a needle is thrust. This prevents the tube from falling into the thoracic cavity, whilst two sutures applied to the margins of the external wound and tied around the needle to prevent it from being forced outwards. During the operation and immediate dressing, and also during subsequent dressing, Dr. Wagner guards the exposed parts by the carbolic acid spray. The first dressing, by which the whole of the affected side of the chest is covered, and which reaches from the axilla to the pelvis, consists of thick layers of Lister's gauze and of salicylated wadding. The first dressing ought not, it is stated, to be allowed to remain for a longer period than twenty-four hours, even though no secretion has made its way to the surface. The

surgeon should then make sure that the drainage-tube remains in position, and that it is patent, and not obstructed by a clot. Retention of pus thus caused is a serious matter in a case of simple empyema, since a continuous and full discharge of the secretion is a necessary condition of a speedy cure. For the same reason, it is held advisable to change the second dressing after a short interval. The thermometer is a sure indicator of retention of pus, but not until this has been established for some hours. During each change of dressing, which, as has been stated, is always done in Dr. Wagner's practice under the spray, the drainage-tube should be removed and thoroughly cleansed, and, if necessary, be shortened before it is replaced. If, during after-treatment of a primarily simple case of empyema, the pus become fetid and mixed with flakes and shreds of fibrine, the pleural cavity at each change of dressing must be washed out with an antiseptic solution. Dr. Wagner recommends a solution (three to eight per cent.) of boracic acid, or a five per cent. solution of chloride of zinc.

Careful observation of temperature is of the highest importance during the after treatment of empyema. In a case of simple empyema, the temperature, after an antiseptically performed operation, should from the first be almost normal, unless there be any disease of the lungs or other viscera. An evening temperature of over 101° should always arouse a suspicion that the pus does not flow freely, or that it is no longer in a good condition. A persistence of fever may be caused also by the presence within the pleural sac of fibrinous masses, and, in such case, steps should at once be taken to remove these. In many cases of empyema, these masses exist in abundance, and set up fever by acting as foreign bodies, and by becoming decomposed. When the purulent fluid discharged at the time of operation is found to contain fibrinous flakes, and the walls of the cavity can be felt to be roughened and covered by similar deposits, the case can only be treated as one of simple empyema, and an attempt must be made to remove all the material. A portion of rib should be resected, in order that the opening in the thoracic wall may be of sufficient size, and the surgeon should then attempt to remove as much as he is able of these fibrinous masses, by introducing his finger and by washing out the cavity. The injected fluid should be an antiseptic one sufficiently concentrated to

disinfect, as far as may be possible, any remaining deposits. The use of such injections should be discontinued until the purulent discharge becomes free from smell, and is no longer mixed with portions of fibrinous material. The further treatment of complicated empyema, so long as the pus is in good condition, is the same as that of simple empyema.

Dr. Wagner warns against replacing too soon during the after-treatment a thick and short drainage-tube by one of smaller calibre. A weak and narrow tube will more readily become obstructed, and offers less resistance to the tendency of the ribs immediately above and below the wound to come together and obstruct the flow of pus. When there has been no secretion for about eight days, and the temperature has remained during this period quite normal, the drainage tube may be removed. The wound generally heals then very rapidly. If in cases of this kind there occur a reëcumulation of pus, the abscess is usually a small one, and its sac is cut off from the pleural cavity. If the discharge do not cease very soon, it would be advisable, Dr. Wagner states, to brush over its lining membrane a strong solution of chloride of zinc. No injection should be made into this abscess, as the recent adhesions might readily be broken down.—*W. Johnson Smith, in London Medical Record.*

ADHESIVE-PLASTER TENTS FOR SINUSES.

Dr. Edward Williams, of Boston, calls attention to the value of adhesive-plaster tents. He rolls up a narrow strip lengthwise, just like a lamplighter, and this pushed to the bottom of the sinus. It may be left there for three or four days until it excites a healthy suppuration. The tent is then removed and the sinus allowed to heal from the bottom. This plan will not take the place of the knife in all cases, but it certainly may in many; and fistula in ano have often been cured in this way, or by the seton which acts in the same way.

CORRESPONDENCE.

MUTILATION OF THE OVARY IN SITU.

To the Editor of North Carolina Medical Journal :

Under this heading I will attempt to describe an operation, which under the circumstances connected with it, and its entire newness so far as I know, must be of some interest to the profession. The operation was done to relieve a most severe neuralgia of the right ovary, called that, by the half-boy physicians, who saw it during the four consecutive months, previous to the operation. To remedy which, all the known neuralgia antidotes were thoroughly tried and abandoned, without even temporary relief. So we desired to perform ovissection or ovariectomy. The 23d of June was appointed for the day, and the writer as the operator.

Before giving the general outlines of the performance it would be proper to give a history of the patient. She is 35 years old, white, been married, had a child about ten years ago, and of a hysterical temperament; has also had uterine trouble for several years. At the commencement of the recent discomfort, from the information I can gain, she had all the symptoms of pelvic cellulitis. The physician who first saw her was our most esteemed friend and brother, Richard Blacknall, who has since died, so we are deprived of some important history.

Two days before the operation, an ounce of sulphate of magnesia was given and repeated the day after, which moved out the contents of bowels well. Making ready our table, which was an ordinary dinner table, with folded blankets on it, placed in a good light, and out of a draft of air (being a hot June day we needed no heated room) a sufficient quantity of well waxed silk cord the size of ordinary fishing line, sufficient quantity of carbolic water, (3 i carbolic acid to pint of purest water obtainable). A good double-valve spray, round pointed bistoury, bull dog forceps, a grooved director, with plenty sponges and large curved needle; rinse thoroughly all the instruments and appliances before using them about the opened serous cavity.

Ready with chloroform, &c., the patient is laid on the table so that the legs hang down from the knees as directed by Erichson.

She is under chloroform, the incision is commenced below the navel, continues down about four inches, exactly in the mesian line, with light strokes of the scalpel so as not to cut through the peritoneum when the wall is divided down to the inner lining. The cutting is stopped until the hemorrhage is entirely controlled. Ordinarily, there is very little bleeding if the cutting is exactly in the mesian line. All the time from the first stroke of the knife, the carbolic spray is worked incessantly over the cut surface and continued until the wound is closed up. The bleeding is, from the little cut vessels, about stopped. A grooved director is let in at the lower end of the incision, and slipped along between the intestines and peritoneum, and the remaining thin portion of the wall left, is slit up with a probe pointed bistoury. As is familiar to all who have opened the abdominal cavity, the intestines seem to increase in size and number, and make a most active effort to get on the outside of the belly. We at first tried to prevent their escape; but after having so much difficulty in securing the ovary they were not only assisted out, as many as would come without too much traction, and remained out for several minutes until the surface felt cold, (we do not mention this as commendatory to ourselves but to show what amount of exposure the peritoneal cavity can have without serious results.) We find that the ovary is not floating loose in the cavity, but firmly adhered to the back near the upper right side of the sacrum, in the meantime, our opening is extended to $6\frac{1}{2}$ inches. Fearing to break up so extensive an adhesion and being unable to use knife or ligature in so confused a space, we decide upon the novel way of destroying the vitality of the diseased ovary by mutilating of it with thumb and finger nail, which was effectually done and left in situ. The size of the organ was very little larger than an almond—the natural size. After which the cavity is cleaned with carbolized spray, intestines replaced, and with needle and well waxed cord about seven sutures are taken through the whole thickness of the wall including the peritoneum, and between the stitches, if any gaping, a narrow strip of plaster. She is taken from the table, laid on the bed, decubitus position, a soft cotton rag wet in the carbolized water placed over the wound, and directed to be changed every thirty minutes. She was given glass sweet milk, and hypodermic injection of morphia. Then left with direction to have 30 drops tr. opii, three times a day.

She was seen next morning. Had slept tolerably well. Temperature 101°. Pulse 104. Liquid food was ordered to be given *pro re nata*. The carbolic cloths kept strictly up, with the laudanum given as before directed.

The temperature and pulse rate increased gradually up to the fifth day when they were in the morning, temperature 103°; pulse 124; in the evening, temperature 103.5°; pulse 130. Then with fluctuations they gradually came down to normal on the eighteenth day.

On the twelfth day the opium was suspended, and an enema of warm water induced a tolerably free evacuation of the bowels.

On the sixteenth day the sutures were removed and the adhesive strips depended on for keeping the wound together, after which there was some little febrile action and pain, caused, I think, from gaping of the wound. Don't be in too big a hurry to take out your stiches, is a good injunction in surgery.

At this writing, the wound has healed up, leaving a nice clean scar, (August 4th, 1881) the patient has walked across the room. and would have been fairly recovered only for a very severe attack of dysentery which came near destroying her life four weeks after the operation. She is well of the bowel trouble, and, I think, will soon be a well woman again.

If there is any objection to my procedure, by the profession, I would like to hear them through the NORTH CAROLINA MEDICAL JOURNAL.

N. M. JOHNSON, M. D.

Durham, N. C.

AN UNEXPECTED CURE OF GOITRE.

To the Editor of North Carolina Medical Journal:

About three years ago I was called to see Mrs. A., who had been suffering with goitre for about seven years; but was now having parotiditis in both glands. She was 48 years of age, a widow, the mother of two children, was of Irish descent, born and raised in the mountains of North Carolina, a poor laboring woman who did

both farm and house work. Her menses had been irregular for about six months and disappeared a few months later.

I found her sitting by the fire very much alarmed about her condition. She said she feared that if her parotid glands continued to enlarge that the three glands would be so crowded together as to produce suffocation by pressure on the trachea; and that she hoped I might be able to prevent such a catastrophe.

I encouraged her to be more hopeful, and gave it as my opinion that such a complication was not very likely to arise.

After thinking for a few moments about the nature of the two affections, I came to the conclusion that little could be done to limit the swelling of these glands. I ordered a saline purge, and a liniment to be applied, composed of lard and oil of turpentine, equal parts. I ordered this to be applied every two hours as hot as the skin would bear it. In the evening I returned and found her about the same.

In the morning of the next day I found resolution going on in the parotid glands. I dismissed the case and in one month the goitre was gone and has not returned up to this date. This liniment was not applied to the bronchocele, or, at least, it was only ordered for the parotids.

Did the acute inflammation of the parotids in any way bring about this cure of the thyroid gland, or was it consequent upon the cessation of the menses, or was it spontaneous? Does any one know of a goitre disappearing under similar circumstances?

S. W. STEVENSON, M. D.

MOORESVILLE, N. C.

PRIORITY OF THE DISCOVERY OF HYPODERMIC QUININE INJECTIONS.

In one of our late issues we noted that Mr. J. W. Moore claimed to have been the first to have employed this means of administering quinine. Had we consulted our right hand man, Neale's Medical Digest, we would have found that in 1862, Dr. James McCraith put on record this method of using quinine as employed by his friend, Dr. Chasteand.

REPORT OF CHAIRMAN ON 'OBSTETRICS AND GYNÆCOLOGY.

Read before the North Carolina Medical Society held at Asheville,
N. C., June 2d, 1881.

By WILLIS ALSTON, M. D., Littleton, N. C.

The history of gynæcology dates far back into Egyptian annals coëxistent with the Sphinx and Pyramids.

Pliny informs us that during the reign of the Ptolemies in Egypt, a medical school was founded at Alexandria and human bodies were dissected. In 642 the Library at Alexandria was burned by Omar and all facts connected with gynæcology perished in the flames. The deciphering of papyri and tablets up to the writings of Hippocrates furnish no knowledge of gynæcological advances, and not until then had we any literature upon the subject.

He discussed metritis, induration, menstrual disorders, displacements and wrote three volumes discussing uterine diseases. From the time of the writings of Hippocrates to the writings of Aëtius, nothing exists but broken fragments from doubtful authors. Nothing authentic appears until his writings which were done at Alexandria in the sixth century after Christ.*

Aëtius speaks of the speculum, sponge tents, medicated and supporting pessaries, the uterine sound, division of the cervix uteri, the cure of sterility, retroversion, reposition of misplaced pelvic organs, examination of the rectum, the vaginal and uterine douche, fumigation by means of hip baths, suppositories, &c.

Paulus Ægineta speaks of the speculum uteri as being in use before his time; pessaries were likewise used in those rude times and they were fashioned after models not unlike those of the present day. The air pessary is described by Columbat as being used by the Greeks.†

The uterine sound revived by Sir James Simpson, and claimed by the French for Samuel Laër, who proposed, in 1828, to penetrate the cavity of the uterus, was described by Méras, who obtained it from Aëtius, as he speaks of the rectification of retroversion and

*†Thomas on Diseases of Women.

its diagnosis per rectum as well as the reposition of latero-version by finger and sound.

Hippocrates advised in the treatment of obstructive dysmenorrhœa, dilatation by leaden instruments and bougies. We have mention also of uterine ulcers, tumors, polypi, abscess, atresias, displacements, hysteria, uterine suffocation discovered by use of the speculum ; these diseases were also mentioned in the writings of Moschion, Antyllus, Aëtius, Celsus, Albucasis and Trotula.*

The speculum as before mentioned is an instrument of antiquity, as there are two preserved in the Museo-Borbonico, at Naples, as well as a double curved catheter like the sigmoid of Sims. These gynæcological relics were exhumed from Pompeii in 1818, and were used in this subterranean city, nearly two thousand years ago. Wienes also in 1557 described the uterine sound. Felix Protu in 1602 wrote extensively upon atresia of the vagina and Scultetus in 1620 treated of uterine ulcers, and gives directions for the use of the speculum, with a cut of the instrument which is a bi-valve.

In 1801 the speculum was revised by Récamier, but its peculiar advantages were not urged upon until 1818. The French claimed this as his invention, but according to Aëtius, Archiques first introduced the speculum. Paulus Ægineta speaks of it as a "diopera" and says it should be introduced into the vagina closed, then turned with the handle up before being opened and the cavity of the woman distended ; this is the same instrument described by Scultetus and consists of these blades opened by a screw. "Albucasis and Avicenna describe a three bladed instrument under the name of "Vertigo."†

Franco in 1560, Ambrose Paré in 1585, Spachius in 1597, Scultetus in 1665 and Garangest in 1783 have all described this instrument. Récamier, therefore, from the foregoing facts cannot be the inventor of the speculum and only its popularization belongs to him.

Gynæcology as a separate and distinct science owes its birth to the brilliancy of that "bright particular star," which rose in the Southern Hemisphere, and rising higher and still higher has spread

*Montrose A. Pallen.

†Thomas on Diseases of Women.

its effulgence over the surface of the entire civilized earth, as an exclusive specialty, it owes its existence to J. Marion Sims.

In 1843, Sir James Y. Simpson used the sound as an instrument of diagnosis. In 1844 he slit the cervix from os externum to tincae for obstructive dysmenorrhœa and used sponge tents for dilating the os and fundus searching for intra uterine polypi.

The discovery of the duck-bill speculum of Sims, its peculiar mode of opening the vulva, and raising the vaginal walls, the bringing of the silver sutures into general use by him, his operation for vesico-vaginal fistula, mark the beginning of modern gynæcology.

I have given you a meagre, and perhaps, an incomplete account of the works and workers of centuries past. I hope, nevertheless, that I have led you along, not entirely in the dark until the brilliancy of Sims' star breaks in upon us; that marks a new and vigorous epoch in the life of our subject. This brings us up from the seventeenth and eighteenth century where Garangest wrote on "inflammation of the uterus," from 1753 "Chepout on prolapsus," Sabatien, 1757, "on displacements of the uterus and vagina;" Astruc, 1765; Desgangres, 1766, "on falling of the womb complicated with elongation of the anterior lip of the cervix"; Levret, 1773, on "Displacements of the womb and polypi of the uterus;" Chambon, 1785, "a treatise on diseases of girls, married and pregnant women, in six volumes;" Morgagni, in 1787, "on obliquity of the uterus, the flexions, inversions, retroversions and hernia of the uterus." Vigarous in 1801 published two volumes, "An elementary course on diseases of women"

During this period gynæcology flourished only in the French Empire; the next succeeding epoch is marked by Récamier's use of the speculum and its introduction into the vagina at Hotel Dieu in Paris in 1818.

In the language of Gaillard Thomas, Récamier marked the modern era by improving our powers of diagnosis in exposing the cervix uteri.

Simpson, another, by opening to investigation the body of the uterus, and Sims, a third, by rendering both investigations more simple, complete and satisfactory.

After going into the history of gynæcological progress thus briefly and cursorily, I will call your attention to some of the acci-

dents of the parturient process for the reparation of which the skillful gynæcologist is called upon to lend his aid. While I cannot, of course, offer anything new or original myself, I will undertake faithfully and truthfully to portray what some of the masters have done and to give the latest and most scientific views of the subject which it has been my fortune to comprehend with what light I had before me.

LACERATION OF THE PERINEUM.

This is not an uncommon accident and happens in almost every midwifery practice. If any preventive means by which this accident could be avoided, could be adopted, this, of course, would be the first thing to do. One great cause of the accident is the improper support of the perineum during labor. Other causes arise from opposition or obstruction to the progress of labor and advance of the fœtus, such as rigidity, dryness and congested soft parts, as in primipara; disproportion between size of the head and shoulders with or without presence of forearm, and that of the pelvis; forcible pushing of the head and shoulders through the soft parts; violent straining, a straight sacrum or a small head; and often, as otherwise from meddlesome midwifery, through large doses of ergot administered either through ignorance or to hasten the labor to have it quick over with. Incomplete flexion or extension of the head, the occiput rotating posteriorly, also straightening out and putting the legs close together during the delivery of the head. In breech deliveries in primipara, when the chin hooks over the perineum a bad rent is apt to follow, and the proper way to prevent it is "to turn the woman on her back separate her knees and elevate the child's body up between them." (Goodell.) For cases of rigidity or disproportion, or of an undersized vulvar opening, anesthetics will be found of great service; they restore moisture and curb expulsive pain.

Prof. Wm. T. Howard, University of Maryland, places one of the causes to occipito-anterior positions, another cause to the position in which the woman is delivered; those lying on their backs are most liable to the accident and a large majority who were delivered on their sides had the perineum in tact. "In the dorsal posture laceration easily occurs because the expelling forces and the whole

might of the child press upon the perineum, and the head is forced in the stage of expulsion to ascend contrary to the effect of its own weight ; these unfavorable circumstances do not exist in the lateral posture." (Schroeder.)

Another cause is too quick delivery with the forceps.

Supporting the perineum is one of the means of preventing rupture, and the mode which imitates nature the most is the best. Goodell's method of supporting the perineum "Imitating Nature."

When the head is rapidly advancing and the woman cries out, that stops the expulsive pains thus retarding the progress, relieves the tense perineum and prevents rupture, this is nature's method. Dr. Goodell advises us to make *direct pressure upon the head itself*. "The word support the perineum," says he, "is a misnomer, it is not the perineum that needs support, *it is the head*."

Continuous pressure with the hand makes the perineum hot, dry and unyielding. Equable distension is prevented and the strain of these expulsive forces expends itself upon the fourchette.

Dr. Goodell has not touched the perineum for many years for the purpose of saving it. When the perineum is very rigid *he* inserts two fingers into the rectum and pulls forward the sphincter ani while at the same time he exerts pressure on the head with the thumb of the same hand. He claims the following advantages for his method :

(a) Nature is imitated by pulling up the sphincter ani towards the pubes ; as she always dilates the anal orifice, this brings forward the perineum without direct pressure. The anal dilatation is complete and causes a relaxation of the strain on the posterior commissure in the line of its raphé.

(b) The same force which dilates the sphincter ani causes the occiput to hug the pubes thus favoring extension, especially if aided by the fingers in the rectum, being hooked over the face and chin.

(c) This aid is not liable to sudden interruption from the woman.

(e) The circulation is not impeded and the parts not benumbed by pressure from the head on one side, and the part presenting on the other.*

The rent in the perineum is not always complete, nature's efforts

*Lessons in Gynecology. Goodell.

accomplish some good and avert in a great degree a very serious and difficult operation.

Those cases where the sphincter ani is torn through are generally the result of the forceps and a wholesome lesson does Dr. Goodell give us on its use, when he says "in general and always with primipara you take off your forceps as soon as the perineum begins to bulge and that you leave the final delivery of the head to the expulsive efforts of your patient." There is one condition in which the forceps protects the perineum and it is a lesson of such practical importance that I will not refrain from inserting it here. "Whenever the pubic arch is too narrow, the sacrum too straight or the head, in an occipito-anterior position, is overflexed and the vortex bears on the perineal centres, and threatens to perforate it; whenever in an occipito-posterior position the head is too flexed, the forceps is urgently needed."

Authors differ as to the length of time after the rent, in which it should be sown up. If the rent is very small and confined to the skin and not extending much beyond the fourchette, nature with a little assistance will heal it up during the time the woman has to lie in. The accoucheur should deliver the placenta *at once*, to prevent blood from damming back into the uterine cavity, thus preventing full contraction of the womb and increasing the liability to hemorrhage. Whenever with a womb contracted hard after labor, there is issue of blood, the vulva should be inspected as alarming hemorrhages often issue from the lacerations. In the great majority of cases, the laceration is caused by labor, but the perineum has been torn from the breaking of a chamber pot or from women impaling themselves upon the handles of hoes, rakes and brooms, from whatever cause, the treatment is the same.

Graily Hewett says the operation should be performed one hour from birth. Gaillard Thomas advises the operation while the woman is in an anesthetic sleep, just after labor is over, and the parts are benumbed and need not much, if any, paring, unless the rent is so extensive as to make the operation a lengthy and serious one, or "to insure the passage of the lochial discharge between the lips of the wound."

Dr. W. T. Howard thinks, even in slight laceration, where the perineum is torn one inch or less from the fourchette, and although

generally divided by obstetricians to remove blood clots, bandage the knees together and turn the woman on the side to let the lochia pass through the superior vaginal commissure, and not over raw surfaces, upon which the discharge has a poisonous influence; in these cases union is altogether exceptional and that the parts should be promptly brought together by sutures and the catgut sutures of Dr. Warren Bricket, of New Orleans, are preferable, as they give way when the swollen parts put them on the stretch, and they can be left in situ as they are readily absorbed. Dr. Goodell, says, "you must at once sew up the wound."

It is not within the scope of this paper to go into minute details of the different operations by different authors instituted in each individual case for the reparation of this accident, therefore, I will only call your attention to the most important.

The ancients described this accident but give no evidence of any surgical procedure for its reparation until the time of Ambrose Paré, who advised the suture and was followed in his operation by Guillemeau, his pupil. It was afterwards, according to Thomas, employed by Delamotte, Laucerotte, Trainel, Noel and others. In the last half century rapid progress has been made in the operation by Brown in England; Verneuil, Langier Demarknay and others in France; Langenbeck in Germany; Sims, Emmet, Bozeman and Agnew and Goodell and others the United States.

The frequent failures attending operations for laceration of the perineum has led Dr. Emmet to closely investigate the causes and in his own language I can better portray the difficulties he encountered in doing so.

"To unravel the cause of failure and to devise means of obviating it, has occupied my attention for years. To appreciate so simple an operation has cost me more thought than any other point in the whole field of the branch of surgery to which I have devoted myself." It was left then for the genius of Emmet to study out the difficulties in the way of the success and to set them forth in an admirable paper from which I quote.

EMMET'S OPERATION.

"When the perineum and the muscular ring forming the sphincter ani has been divided, a gaping triangular opening is left, the

base of which would be formed by the lacerated muscle, and the apex by the limits of the laceration in the recto-vaginal septum,

Gradually the muscular fibres retracts in proportion as they have been freed. Consequently the fibres which have formed the inner surface of this circle when in its integrity, will have shortened more than those on the outer margin, which still remain attached to the surrounding tissues. This shortening of fibres has been overlooked by the profession and in cases of long standing, is the cause, after an operation, of failure in gaining entire control over escape of flatus and the contents of the bowel when in a fluid state.

As the operation only extends to the denuded surface from above, (diagram left out) to the apparent limits of the laceration, but a small portion of the muscle can ever be brought in contact. In a large number of cases not a fibre of the muscle is united, although the perineum may have been restored and the laceration through the recto-vaginal septum closed by the operation. The success of the operation is due to the point at which, the first suture is introduced, in relation to the edges of the divided muscle. * * * Introduce the suture at some distance behind the muscle toward the coccyx and on securing the suture the divided edges of the sphincter must be turned up and brought in perfect apposition. The patient should be placed on the back with the legs flexed on the abdomen, and held by an assistant on each side. The surfaces which have been lacerated and to be denuded are generally well mapped out by a cicatricial glaze, and under ordinary circumstances without sloughing has occurred there can be but little difficulty in determining the extent. I prefer the use of a pair curved scissors to the knife, and the surface can be removed with greater dispatch and less loss of blood. The denuding should be commenced from the most depending point and extended upward so as to be free from annoyance of blood flowing over the surface to be freshened. If we examine carefully the extremities of the lacerated muscle we will find a slight pit or depression at each end which has been caused by the contraction of a portion of its fibres. It is necessary to freshen these surfaces. With the index finger of the left hand in the rectum to serve as a guide, a stout needle (about two inches in length, straight or with slight curve near the point and armed with a double silk ligature) is introduced behind the muscle and to the

left, and made to sweep around the angle of the laceration in the septum to the point of exit, by gradually rotating the forceps. * * As the point punctures the skin in its exit, the index finger is withdrawn from the rectum to aid the passage of the needle by sliding back the tissues sufficiently for it to be seized by the forceps and drawn through. The second suture is introduced just outside of the end of the needle and in the same place with the divided rectal edge. The third suture is to secure the vaginal edge of the laceration, it should be made to include the tissues liberally and to sweep around the angle at some distance beyond the first and second suture as this one is most liable to cut through the recto-vaginal septum. The third and fourth suture would bring together the portion denuded on the posterior wall of the vagina with the view of increasing the depth of the perineum. A portion of the silver wire is to be twisted to the end of each silk loop and drawn through in turn. It is necessary to secure first the longest suture.

I have met with but few instances where the fissure in the recto-vaginal septum could not be included within the deep sutures passed as I have described, when the exception has existed, I have denuded the edges and brought them together down to the sphincter with a sufficient number of interrupted sutures. I have then afterwards closed the perineum by a subsequent operation or performed both operations together.

LACERATION OF CERVIX.

Although this lesion has existed, perhaps, ever since woman undertook the parturient process, yet we are indebted to Dr. Thomas Addis Emmet for first calling the attention of the profession to it as a frequent and overlooked cause of disease. In September, 1874, he set forth his views upon this subject in a paper read before the Medical Society of the County of New York. This lesion may take place any where within the periphery of the os, but when it is single, it is generally found, according to Goodell, on the side toward which the vertex presented—on the left verge usually. If it is double, it usually runs from left to right across the cervix splitting it into two lips. The causes of this accident are the early rupture of the membranes the use of ergot, the resort to the forceps before the os becomes dilatable, and frequent attempts

to forcibly push up the thinned out cervix over the presenting part; all these agencies hasten the passage of the presenting part, and jeopardize the continuity of the cervix. The early rupture of the membranes may be classed among its first and most prominent causes.

Dr. Emmet says that the median lacerations are the most frequent, and more so through anterior than posterior lip. If the rent occur in the median line, anterior or posterior or clean through both, union by first intention takes place. The greatest play of the womb is forwards and backwards and the rent is in a line with the greatest play of womb, therefore in the backward and forward motion no reparation of the laceration occurs and by the compression of the vaginal walls the two raw surfaces are kept close together, and union takes place. Lateral fissures cross the axis of motion, the posterior lip is held back by the posterior vaginal wall and the sacrum—the anterior lip is separated thus from the posterior, and union in the posterior rarely takes place, though sometimes by granulations the rent will partially fill up, and especially, if confined to one side; it never, however, heals so perfectly that its traces cannot be seen.

This lesion is not readily discovered after labor; apart from bleeding from the lacerated surface no immediate symptoms refer to this lesion. According to Emmet, although the rent may extend beyond the vaginal junction, the utero-cervical artery will usually stretch and escape being torn, thus preventing much hemorrhage. If the laceration fails to heal and gapes open with red everted edges, perinenterine inflammation is pretty sure to follow. Pain in the broad ligament corresponding to the torn side is apt to ensue, if double, pain on first one, then the other side; too abundant lochia, and subinvolution are its sequences.

The diagnosis of this lesion is generally very easy; place the patient in Sims' lateral semi-prone position, introduce his speculum and pull down the uterus with tenacula inserted into each lip closing the fissure. Take the tenacula out and the edges of the torn cervix roll out again. This is a frequent lesion producing many uterine diseases. Dr. Paul F. Mundé, of New York, who has written an admirable paper on the subject, states that those women applying to him, 17 per cent. presented lacerations of the cervix. Dr. Hanks

puts the average at 8.4 per cent. Dr. Montrose A. Pallen puts it at 40 per cent. Dr. Emmet deems it the cause of most of the uterine disorders. Dr. Goodell thinks one out of six has ununited lacerations of the cervix. Dr. Goodell has operated fifty-four times in two years. Leucorrhœa, menorrhægia, hyperplasia, both cervical and corporeal, chronic ovaritis, and all kinds of prolapsus occur from this rent. (Goodell.)

There is but one remedy for this lesion, and that a surgical one. Preparatory measures should be adopted before the rent is sewn up. Dr. Goodell says acute lacerations should be treated with great cleanliness and rest. Carbolic or permanganate potassium washes should be used daily, and lumps of ice and vaginal injections of hot water. Alum and tannin should be used if hemorrhage occur.

Dr. Emmet in his preparatory treatment lifts the cervix from the floor of the pelvis by an India rubber ring pessary which keeps the surfaces in contact; a gallon of hot water 100° F. should be thrown up twice a day, tannin and glycerine once a day, and ferri subsulph. once a week. Dr. Goodell uses corrosive chloride of mercury combined with ammonium, chloride or tinct. ferri chloride when the broad ligaments are tender, and the roof of the vagina is hard and tense, together with blisters over the sensitive parts. He uses the curette to scrape away all unhealthy granulations and when the menses are too profuse. When all traces of inflammation have subsided, then is the time to operate and not before.

GOODELL'S OPERATION.

He uses the duck-bill speculum, separates the rent by two tenacula to find out the position of the cervical canal, draws them together to ascertain the site and size of the future os externum. Steadying the surface with a double tenaculum he pares the edges of the os externum and passes on each side of it through both lips of the cervix, a long iron wire suture, traction upon which draws the cervix down within reach.

He denudes the edges of the fissure and dissects away all cicatricial tissue in a wedged shaped piece, using a long handled knife and the bill-shaped scissors. In deep fissures the circular branch of the uterine artery is in danger of being wounded and the surface should only be skinned over with a delicate knife curved on the

flat when hemorrhage occurs. Emmet's watch spring tourniquet should be used. Goodell finds traction on the ends of a wire suture passed deeply below the fork of the wound will stop the bleeding, when enlarged Nabothian glands are mended. Dr. Goodell dissects them out. They present union at their site. Great care should be taken to leave an undenuded tract for the cervical canal.

Passing the Sutures.—Dr. Goodell uses a double silk thread passed through the edge of Sims' lanced point needle, hooking the bent end of a silver suture into the silk loop and drawing all through together. He twists the ends of each wire together temporarily, washes the wound with carbolized water and then secures the sutures with perforated shot closely clamped.

If secondary hemorrhage ensues, Dr. Emmet advises injections of water hot as can be borne. With the proper after-treatment this operation is attended with great success. Indeed Dr. Goodell says, "when performed with care and after the manner in which I have just described, this operation is perhaps the most successful one in uterine surgery."

RAPID DILATATION.

Dr. Goodell says "that rapid dilatation of the cervical canal is a most valuable operation." For straightening out anteflexed or retroflexed wombs, and for dilating the cervical canal in cases of stricture of the internal os, conical cervix, sterility and dysmenorrhœa, rapid dilatation is a very important and efficient means of averting and dissecting difficulties. The operation is performed by different instruments devised for the purpose, such as Atlee's dilator, Wilson's curved dilator and lastly uterine tents. In cervical endometritis the dilator is of great service in allowing internal applications to be freely made; also in hemorrhages from sub-involution, and tumors of fibroid growth. The dilator opens the way for the introduction of the stern pessary and large tents, and as it rapidly does what the tent is tardy in doing, the latter is often dispensed with. Uterine tents are often and commonly made of laminaria, called sea tangle tents, sponge, slippery elm bark, and the root of the black gum, used now very extensively in Germany, and imported then, from the United States. In cases of uterine flexions, Dr. Goode'll prefers the slippery elm tents where

prolonged treatment is required ; they are of less expansive power, but can be left in longer and become softened down, and absorbed by the discharges. In sterility, arising from stenosis, instead of using tents placed in a day previous to the catamenial flow, rapid dilatation is now used. When tents are used for any cause, in which more than one has to be inserted in succession, the danger is increased at each introduction, and rapid dilatation of the canal is much the safest, and more effective. If uterine tents are used, detergent solutions lessen the risk of danger, such as chloride of sodium and chlorate of potassa.

PROLAPSE OF THE OVARIES.

The monthly recurrence of the periodical flow fills the ovaries with catamenial blood, and they become heavy from their own weight, and sink low down in the pelvis, from this cause. They oftentimes can be felt by introducing the index finger into Douglass' cul de sac. If this congested state remains they do not return to their place in the abdomen, but from disease remain in the unnatural position, and morbid phenomena ensues, generally some uterine lesion acting either as a cause, or is the result of this prolapse. Laceration of the cervix, retroflexion of the womb, or subinvolution, and sterility are frequent causes as well as sexual excess, and ovarism, the left ovary is usually dislocated, when only one is out of place. In the symptoms, our first attention is called to pain in loco-motion, which at each movement, catches the prolapsed ovary between the sacrum and the uterus and giving rise to intense suffering. It is a pain similar to that often experienced when riding horseback, if mashing the testicle on the pommel of the saddle, nauseating and very sickening, and pale faced, with cool shiverings,

The genito-crural nerve which runs down the thigh, is often the tract of pain in this trouble. A loaded rectum adds to the pain, as the hard fæces act roughly on the sensitive parts. Pain confined to one groin, and in coition, are other symptoms of this malady. All this is attended by great hebetude, and extremely low spirits. Menorrhagia, dysmenorrhœa, and uterine trouble in general, most always forces these patients to seek aid.

Dr. Goodell prescribes first in these troubles: Brom. pot., grs. xxx, and tinct. digitalis gtts. x ter die, in $\frac{3}{4}$ ss infusion gentian comp.

he does this with the view of keeping down any erethism of the sexual organs as both medicines are anaphrodisiacs. In two weeks then, he uses alteratives, and chloride of ammonium and bichloride of mercury are his favorites here ; he also lauds chloride of gold and sodium. Blisters often repeated over each ovary, scarification, carbolized iodine, suppositories of iodoform and belladonna and last but by no means the least, *hot water*. Hard pessaries and those which are too short to stretch out Douglass' cul de sac do more harm than good, the air rubber pessaries are best suited to this condition of prolapsed ovary with some uterine displacements. Goodell uses an elastic ring pessary. Dr. H. F. Campbell, of Georgia, recommends the placing of the woman in the knee-breast posture, almost three times a day, with knees ten inches apart, and thighs perpendicular to the bed. If the woman in this position opens the vulva with one hand, the air rushes in, and after the method of Sims, lifts the vaginal walls and sags the abdomen and contents down, but the woman cannot very well spare one hand and Dr. Campbell recommends the use of a glass tube open at both ends and to come out at the vulva.

Abdominal braces are used for supporting the external parietes, and Dr. Goodell explains their action thus : "By pressing the abdominal wall upward and inward the brace forms a shelf on which the viscera rest, and thus takes off a portion of the load from the womb and its ovaries. By virtually narrowing the pelvic aperture, it lessens the space into which the viscera tends to crowd, and to that extent, protects the pelvic organs. By bringing the pelvis backward, it makes the axis of the upper strait lie more obliquely to the axis of the trunk ; and the sum of the visceral pressure now converges, not in the pelvic basin, but on the portion of the abdominal wall, lying between the symphysis pubis and the umbilicus."

Dr. Weir Mitchell has combined with the knee breast posture, rest in bed, massage, electricity, and forced feeding, and the daily forcing up of the ovaries, with the atmospheric method above described. The ovaries under this treatment, after fat and health are restored, generally stay up. If, after all, the ovaries remain prolapsed and give trouble, the dernier resort, is extirpation. This does not unsex a woman, nor make her less a wife or a mother, while it takes away all hopes of future offspring. (Goodell,)

GOODELL'S "NERVE TIRE AND WOMB ILLS."

There is a class of undefinable ailments which we all meet in practice, nothing definite about them, nor any symptoms which lead to positive disease, yet we see women languid and dull, morose and melancholy, nervous and hysterical, without any direct attention to any particular malady. These ills are brought about by overwork in household affairs, by making up beds, stooping down to keep the hearth white and clean, by stretching their arms in the act of sweeping down cobwebs, washing the paint and the windows and oftentimes in the exertion of making up nice rolls for supper, and using the sewing machine—the greatest curse of modern times. Mental overstrain,—neurasthenia—is seen in women who are oversensitive, and overtaught and who lead sedentary lives, and from all this we have, first, in cerebral exhaustion: "Clavus, wakefulness, heaviness, asthenopia—want of concentration upon any subject. The exhaustion of the stomach is manifested by flatus, by nausea, by gastralgia, by capricious appetite, etc., and spinal exhaustion by tender spots, backache and weariness." (Goodell.)

The schoolroom which constantly keeps an overtaxed girl confined to her books is often the starting point of these troubles; she loses her appetite, grows weak and pale, has headache and spineache and complains of an infra-mammary pain. Leucorrhœa and painful menstruation afflict her, vesical disorders come on and she finally becomes hysterical.

Upon examination per vaginam, ante flexion and endometritis will be found; these are not prime factors of disease; but only the results of a "brain-crammed" girl whose developing nerve centres are unable to bear the strain put upon them, and they break down, causing cerebral exhaustion, spinal irritation, headache and backache with anæmia and dysmenorrhœa. Thus malnutrition and exhaustion of nerve tissue, caused by the "high pressure" system of education are the starting points which in after life unfit our women for maternity, and only make wailing invalids, when we ought to expect strong minded and strong bodied matrons. Some of the symptoms attending this nerve tire and "womb ills, are hysterical disparennia, disphagia, dysuria, dyschezia, dyspnœa," and other hysterical symptoms, such as vesical catarrh, vesical calculus, and coccygodynia. Local treatment in these cases, Goodell says,

does no good, nor do therapeutic measures avail much more. Dr. S. Weir Mitchell in his work on "Fat and Blood and How to Make Them" first sounded the key note of success in treating these ill defined "Diseases of the Womb." "The essence of the disease, says Dr. Goodell, lies not in the sexual organs but in the nerve centres. These lack-lustre-eyed, thin blooded, tender spined and emotional creatures give a history of exhaustion, of wakefulness, of great nervousness, and of constant backache and ovaralgia. There are four objects to be secured—nutrition, sleep, rest of body and of mind, and freedom from pain.* Large doses of iron and food at stated hours. Massage and electricity form the principle part of the treatment, and seclusion is also of great importance. Goodell places four manipulations to massage as follows: 1st. Effleurage, stroking, friction or surface rubbing; 2d. Petrissage, kneading or deep rubbing; 3d. Tapôtement, tapping or percussion; 4th. Passive and active motion.

"Massage and electricity raise the bodily temperature, stimulate the nervous, promote the secretions and increase the peristaltic action of the bowels." In all of Dr. Goodell's cases he used the faradic current. In cases of fat and flabby women with feeble hearts with menorrhagia, he used skimmed milk after Mitchell's plan, Bland's pill and tinct. digitalis.

The rest cure, massage, and electricity with proper feeding, to sum up, alleviates the womb ails of the climacteric, relieves the overworked woman—either mental or physical, corrects sexual excesses, and restores prolapsed ovaries, cures menorrhagia, granular erosions, intermenstrual ovaralgia and coccygodynia and obviates the necessity of spaying a woman for pernicious menstruation.

For anything new in this paper, or any facts which may interest the reader or point him where to find them I am indebted to the writings of T. Gaillard Thomas, Thomas Addis Emmet, Montrose A. Pallen, W. T. Howard, and Wm. Goodell.

*Goodell's Lesson in Gynecology.

REVIEWS AND BOOK NOTICES.

ANTISEPTIC SURGERY. The Principles, Modes of Application, and Results of the Lister Dressing. By JUST LUCUS-CHAMPI-ONNIÈRE. Translated from the French and edited by FREDERICK HENRY GERRISH, A. M., M. D. Portland : Loring, Sport, & Harmon. 1881. Pp. 240.

The Listerian method of treating wounds has occupied large space in the pages of medical journals, and has occupied the attention of medical men in all parts of the world for several years. This method is just now taking its proper place, and we are in a better position to judge of Listerism.

Upon the whole the detailed methods of Lister, are falling into disuse in those countries where at first they met with the greatest favor, and can hardly be said to have obtained much of a foothold in America. Still the advocates of Listerism are very tenacious of their opinions, and spare no means to demonstrate the value of septic dressings of wounds.

This volume is a translation of a French work, the editor declaring in his preface that "although for more than a decade one could hardly glance through a medical journal without seeing something concerning the Lister method, there are comparatively few medical men in this country who have a sufficiently good knowledge of this modern system of treating wounds to enable them to apply it with essential accuracy. * * * This condition of affairs is largely due to the fact that there has been no low-priced treatise on the subject in the English language, from which one could acquire the necessary information with regard to principles, practice, and results of antiseptic surgery."

The author treats fully the theoretical views on which the practice of Lister dressing is based ; details the steps in the dressing of fresh wounds, and of old wounds; when to omit dressings; the use of sutures, and compressing with carbolyzed sponges; drainage, the antiseptic spray, figuring the many machines in use ; the catgut ligature; the influence of the dressing on the process of repair; general results, fortified by hospital statistics, to which is added the application of the method to particular operations.

The list of antiseptic drugs used is quite large. Starting out

with carbolic acid, one after another has been added until we have now many greatly preferred to carbolic acid.

As far back as 1852, Dr. Will. Geo. Thomas, of Wilmington, discovered that a strong decoction of chinquepin bark arrested the odor of lacerated wounds, and he treated many such cases successfully without ever claiming its value upon any precise antiseptic theory.

The septic theory which Lister has elaborated, if entirely untrue, which we do not argue, has excited a vast amount of valuable research, and above all has taught surgeons that cleanliness and strict attention to small matters of dressing, are necessary for the best results in treating wounds of all sorts.

The department of surgery in which Listerism has earned the greatest success, is in surgery of the great cavities. With our present knowledge it would be next to criminal neglect to undertake abdominal or pelvic surgery without using some antiseptic method. We can not go so far as to say that rigid Listerism is necessary, for that is *subjudice*, but it seems entirely demonstrated that danger to human life is, in abdominal surgery, far less since antiseptic precautions have been observed.

Carbolic acid seems to have reached the zenith of its fame some time since and must give way very soon to its rivals. Eucalyptol, menthol, salicylic acid, boric acid, oil of turpentine, and other less objectionable articles are growing in favor.

Dr. Gerrish has performed his part of the work with commendable zeal and skill, and his publishers have ably sustained him by producing a very handsome volume.

PHOTOGRAPHIC ILLUSTRATIONS OF CUTANEOUS SYPHILIS. By GEORGE HENRY FOX, A. M., M. D. Forty-Eight Plates from Life, colored by hand. Parts 10, 11 and 12. New York : E. B. Treat, No. 757 Broadway. 1881.

We have before called the attention of our readers to this work as it has appeared in separate parts, and now that it is completed, we are better able to judge of its merits. We do not hesitate to believe that it stands unequalled as regards the illustrations of cutaneous syphilis. There have been more highly pictorial works on the same subject, but we have seen none so true to nature. Not only this,

Dr. Fox has selected a series of highly typical and instructive cases, and the aid which it gives to accurate diagnosis can hardly be over-estimated.

In this last series of three numbers, the cases selected are excellent examples of ulcerative syphiloderma, hereditary syphilis and syphilitic inflammation of the fingers; but more especially we call attention to the illustrations of *chancre* and *chancroid*, compared side by side, so as to give at a glance the characteristic differences. No amount of skillfully written text could make such a correct impression. The illustrated case of syphilitic teeth is very fine, and the plate appears to us to be as good as the best of the series.

The text is highly practical, both as regards diagnosis and treatment, and squarely up with the present advanced stage of syphilography.

The work concludes with a formulary of standard and well known preparations. This is useful and appropriate in a work of this kind. The author has entirely ignored the old Apothecary's weight, though giving decided preference to the decimal system, but forgetting that the large majority of his readers who have not learned to think in decimals will hardly applaud him. The decimal system cannot be forced upon the profession in this country by the anxiety of authors. If we are to judge by the signs of the times, this foreign plant is rapidly drooping and will die sooner or later.

The publisher announces that at an early day he will be prepared to fill orders for this work in the French and German language, "editions of which are in course of preparation in Paris and Leipsic." This indication of a foreign demand shows plainly how great a success has been attained by our author, and we congratulate him upon the final completion of a work that has brought him substantial renown, and added new triumphs to the art and science of dermatology in America.

A PRACTICAL TREATISE ON HERNIA. By JOSEPH H. WARREN, M. D. Second and Revised Edition. Fully Illustrated. Boston: James R. Osgood & Co. 1882. Pp. 428.

We noticed the first edition of this work in the March number, 1881. At that time but few cases were reported apart from those tabulated and included in the works of Heaton and Warren.

Since then the method of treating hernia by the subcutaneous injection of slightly irritating fluids has been resorted to by surgeons in different sections. We gave the reports by Dr. W. H. Heath, of Buffalo, N. Y., in our April number.

This the second edition Dr. Warren's work comes to us in a new dress, augmented in size and value by the addition of some superior illustrations from Bougery and Blandin, and printed on excellent paper. The zeal and industry of the author in all that goes to make up a handsome volume, and his extensive research is evinced by many excellent quotations from long forgotten, or little accessible authors.

Although the work is as it claims a complete treatise on hernia, the important section—the principle of action to which all the lore of surgical learning is only accessory—is the author's modification of Heaton's method.

It may not be amiss to refresh our readers' memory of his plan, and the author's description will serve us.

The instrument employed for the subcutaneous injection is a syringe of the capacity of about sixty minims, having a valve to discharge the contained fluid after it has been properly placed. The syringe is armed with a needle, "flattish, oval in shape, and twisted throughout the entire length." A valve is situated just below the bottom of the barrel. "*Below this valve is a diamond or other hard stone, concaved to fit exactly the convex head of the needle which plays upon it. The last shape this instrument has reached is less expensive, the head of the needle revolves on a ruby.*"

The fluid employed with the most success seems to be the fluid extract of *white oak*; the new compound to which he gives preference because a much larger amount can be used with impunity than any other he has employed, is a denser extract of oak, to which is added alcohol, sulphuric ether, sulphate morphia, and tincture veratrum.

The operation for inguinal hernia is thus described :

The patient is first placed upon a table specially described or upon a bed. In the latter case his hips should be elevated by a pillow, whilst the head and shoulders should be allowed to somewhat lower in order to produce a slight curvature of the spine and relaxation of the abdominal muscles.

“ The patient being thus in a relaxed yet firm position, we seek the hernia to be operated upon, and, after reducing the protruded intestinal sac and omentum by taxis, we pass the left middle finger up the spermatic canal until we come to the inguinal hernia. The end of the middle finger, being slightly raised as above mentioned, is felt by the forefinger, which also help us to indicate the exact point, and is a guide to insert the point of the instrument. Having ascertained that the ring is well open and free from attachments or adhesions to the returned sac. We begin to insert the needle at the lower portion of the ring, where we feel its edges through the abdominal parietes. The needle should always enter this lower portion of the ring, as in passing obliquely upwards and backwards it is less likely to wound either column of the internal ring. Great care should be taken in inserting it through the integuments and superficial fascia, so as not to wound the external pillar, but to enter the canal at once. The needle then should never be passed in a perpendicular direction, as there is thus danger of wounding the spermatic cord, but it should receive the necessary obliquity as soon as we feel that it has passed through the integuments. We can diagnose the position of the needle when first entering, by passing the left fore or little finger up with the invaginated scrotum upon it. When we have passed the needle through the integuments, we begin to open the valve and slowly push the needle in the direction already indicated.

“ As the needle is thus inserted, it revolves and injects the fluid in sufficient quantities to cover well the external and internal rings. (In most cases ten or twenty drops will be sufficient.) The needle now is slowly withdrawn, pressure is made with the end of the fingers over the wound and rings for five or ten minutes, until the smarting pain subsides.”

A pad is placed over the wound and secured, and the patient put to bed for two days with his legs together, and he is not to be allowed to rise to relieve his bowels and bladder.

Dr. Warren will excuse the incredulity of most of his readers, but as all other operations for radical cure of hernia have been abandoned by most surgeons, as harmless an operation as this one appears to be might be tried. We need an accumulation of experience yet before we can applaud or condemn what our author has

been at so much pains to put before the world in so elaborate a treatise. Apart from the special method advocated, the volume will be read with pleasure by all interested in the literature of hernia.

MEDICAL COMMUNICATIONS OF THE MASSACHUSETTS MEDICAL SOCIETY. Vol. XII. No. VII. 1881. Pp. 255—VI.

This volume opens with the Annual Address by Dr. J. Collins Warren—"Medical Societies: Their Organization and the Nature of Their Work," which appeared in the *Boston Medical and Surgical Journal*. We are glad to see it in this permanent form, as it is most worthy of a place in the library of every physician. Dr. Warren has brought together historical outlines of important Medical Societies, European and American, giving us an interesting and continuous narrative of the rise, progress and results of these bodies. A considerable space is devoted to Medical Society of North Carolina.

We give the following foot-note :

"Dr. L. Julien Picôt, the Secretary, writes: "Citizens of the State are beginning to demand of these local practitioner that they obtain a license. When a new man settles in a community it is asked of him at once if he has stood and passed his examination. A diploma counts for nothing now in North Carolina if a man cannot pass the Board. Fortunately, we have no 'pathies' as yet in our State." To which might be added: "But with returning prosperity and wealth, quacks will probably abound."

This latter surmise of Dr. Warren may be correct, but the prosperity of ante bellum days did not attract many "pathies" to these regions. It is well known now, as far as homœopathic doctors are concerned, that their patients are in the great majority, northern settlers, or persons who have caught the mania from their friends while on visits to the north, or by education of children in northern schools. We sincerely hope that increasing prosperity will fortify our Board of Examiners, until a uniform standard of education has been attained. Certainly, so far, the homœopathic physicians in this State can be counted on the fingers of one hand.

The Centennial Address is by Dr. Samuel Abbott Green, of Boston, and must be of absorbing interest to physicians in every State. Dr. Green shows that the Massachusetts Medical Society is the

oldest Society in the country, that has held continuous sessions. Its record is indeed that of a useful pioneer, in many great things. Inoculation was first performed by Dr. Zabdiel Boylston, in 1721, only a few months after it was first performed in England and without any knowledge of its having been done there. Vaccination had also its first beginning in Boston, under the firm hand of Dr. Benjamin Waterhouse in 1800, a sketch of which appeared in the JOURNAL for January.

The State Medical Society in Massachusetts had its beginning in 1781, eighteen years before we have any record of a medical society in this State.

The proceedings of this Centennial celebration will interest every one interested in medicine, more particularly the unique and beautiful poem by Dr. Holmes. We rejoice with our Massachusetts friends at the vigor and unequalled brilliancy of their poet-professor. Long may he retain his intellectual power, to grace and enliven such assemblages, and to give tone and moral force to the American medical profession.

THE NORTH CAROLINA MEDICAL JOURNAL offers as a premium for the best prepared and complete herbarium of the medicinal plants of the State, the following works, or their equivalent, in volumes the successful competitor may choose :

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Herbaria must be sent in on the 2d Tuesday in May, 1882, at the Concord meeting. For further particulars address Editor of the JOURNAL.

CURRENT LITERATURE.

THE DANGERS AND THE DUTY OF THE HOUR.*

This address sets forth under the heads : *The Faulty System of Female Education*, *The Decay of Home Life*, and *The Unwillingness of our Women to Become Mothers*, the dangers which beset society. As the boarding schools for young women have their brains crammed, and their physical care neglected, that it is so common for girls in boarding schools to suffer either from amenorrhœa or from irregular menstruation, that there is a general impression in the community that, in these schools, some drug is secretly given in the food to lessen the laundry work. Under the high pressure system of our public schools even a class which ought to live by manual labor is made unfit for it. Hence an inability to work attaches degradation to domestic labor, and town and city, therefore, teem with pale-faced and flat-chested women who seem to have no other hold on life than a capacity for momentary enthusiasm, no other aim in life than to cultivate small hands, small waists and small feet.

Dr. Goodell thinks that the decay of home life begins in the public parade of girls at school commencements, giving them a self-consciousness which asserts itself in all unwomanly craving for the outside heat and stir of life, and not for the inside repose of home. They, indeed, "come out" while yet in short skirts, and entertain when they should yet be in the nursery. The fact is that now-a-days, to foster domestic virtues, to cherish home and its surroundings, to be a true and helpful wife, a woman has to *surmount* her education.

"The third and greatest danger of the hour embraces two sins which defile every class of society—sins which like the plagues of the frogs, creep into our 'houses and bed-chambers, and beds.' I refer to criminal abortion and the prevention of conception. They come from the dainty dilletanteism of our women, which shrinks from having its patrician pleasures disturbed by the cares of maternity. They come from fashion, from cowardice, from indolent

*Read by Dr. Wm. Goodell, before the meeting of the Medical and Chirurgical Faculty of Maryland.

wealth and shiftless poverty. They come from too high a standard of living, which creates many artificial wants and demands many expensive luxuries. Of course immortality has much to do in begetting them : but while regarding all these practices as grossly sinful, I wish to leave out of consideration the question of immortality *per se*. It is not the immortal classes which I wish to reach; not those whose pleasures and profits come from vice, but the wives of our citizens—our fellow countrywomen—on whose good morals and good health depends the prosperity of our country, and yet who are unwittingly tainting body and tainting soul.

“I am amazed at the very low standard of morality obtaining in the community on the sexual relations. So low, indeed, has it fallen that I have known clergymen committing these sins in their own families, and physicians of repute teaching their patients how to sin. To these detestable practices do I attribute in a great measure the general ill-health of our women. These flagrant sins I hold accountable for much, if not for most, of the wretchedness and misery of this land. Why is it, asks a layman, that ‘in the regions of the United States, otherwise most highly favored, nearly every woman under forty is sick or sickly?’ Why is it, I ask, that the waiting rooms of our gynecologists are crowded with so many querulous and complaining women—women with backaches and headaches and spineaches ; women either without sexual feeling or too weak to indulge it? Why do so many women break down either shortly after marriage or very soon after the birth of their first child? It is, I answer, because the great majority of them, false to their vows, false to their moral and physical obligations, are trying either not to have children or to limit their number. It is because, by an immutable law of nature, there are no harmless ways by which gestation can be interrupted or conception shunned. It is because the wife, sinning the most and most sinned against, suffers the most.

“Be the mode of prevention what it may, so much engorgement and hyperplasia and disorganization of the uterine structures and annexes take place in those women who keep themselves sterile, that their health breaks down, and they lose all sexual desire. Then, when they advance in life and there comes that inevitable yearning for offspring, they find to their dismay that they cannot

conceive. What physician of ripe years is there within sound of my voice, who has not been begged by women, once willfully barren but now longing for children, to undo the mischief caused by such practices ?”

The review made of the statistics of divorce, makes a very bad showing for the moral standing of the men and women of some sections of the country. Dr. Goodell then makes the following appeal :

“ As citizens let us see to it that the New England idea, which degrades marriage virtually into free-love, which is creeping towards the far West, and lengthenning out its slimy trail towards our own homes ; which is breaking up countless households and gnawing into the core of our national prosperity—let us, secure such legislative action as shall protect the sanctity of the marriage relation, and hinder these frequent applications for divorce. Above all, let us make marriage less easy, and surround the rite by such safeguards as shall prevent undue haste and unseemly repentance.”

We are glad to be able to assert that the latter part of the charges as to criminal abortion and prevention of conception are not in any serious degree applicable to the communities in this State. Nothing less than the perusal of census tables will convince the skeptical as to the correctness of our statement ; but so sure are we from an intimate knowledge of the fecundity of the women of Carolina, that we are willing to have our opinion tested by the census. New England, must eventually amass large fortunes making baby carriages for our southern babies. An abundance of children is the blessing of poor communities—indeed this fecundity is an index of a certain degree of poverty. However much like jesting it may appear, the primeval fecund condition of the Carolina women as described by old Lawson more than a hundred years is still a characteristic. Lawson said though that the Indian women are said to partake of a root to increase their fecundity, but from his observation he was satisfied that they did not require the root.

It rarely occurs that our physicians are consulted to procure an abortion, and this statement is founded upon a rigid inquiry.

From the foregoing statements we are to be congratulated upon this aspect of our social status. Our women have their share of children, and this is a blessing which poverty brings. Perhaps

though, as suggested by Dr. Collins Warren that with our return to prosperity may decrease the birth-rate. We can only judge by the past. We have had a large degree of prosperity and escaped then the ravages of abortionists, and the inroads of the irregulars. It would require a wonderful influx of riches to work a social revolution of such a grave character, and we may certainly congratulate ourselves that the establishment of the Malthusian doctrine is apparently in the distant future.

KOINO-MALARIA.

Brother Mulheron, of the *Michigan Medical News*, says that when this *Journal* alludes to "koino-malaria," "its editor delves in the musty lore of the dead past." Prof. S. H. Dickson, in every course of lectures at the Jefferson Medical College, up to the time of his death (only ten years ago) always required a student to know the difference between idio and koino-malaria. Indeed the vague and indefinite term malaria applies as well to the poison of typhoid and typhus fevers, as it does to the poison of intermittent fever; and the best teachers of the present day use the terms idio-malaria and koino-malaria to establish a broad difference in the air-causative of fevers so widely different in themselves. This contribution of Lancisci is one of his best. As to dropping it because it is old, one might as well drop the whole technology of anatomy.

Transfusion of Blood by the Peritoneal Cavity.—Dr. Lava (*Cbl. f. Chir.* 1881, page 176; from *Osservatore, Gaz. delle Cliniche*) gives an unusual case of blood-transfusion into the peritoneal cavity in the case of a patient suffering with progressive pernicious anæmia with hyperleucytosis. Two hundred and ten grammes of defibrinated blood were injected by means of Castieau's apparatus. Death supervened forty-one hours after the operation, and at the post-mortem examination diffuse sero-fibrinous peritonitis was found, together with anæmia. In the intestine were found a large number of anchylostomata.—*Phil. Med. Times.*

UNIFORM STANDARD OF DRUGS.

A correspondent in the *Sanitary Engineer*, (October 15) over the signature "Pharmacist," showing the great inconvenience and the possibilities of fatal errors in not having a uniform standard of drugs. His summary being a resumé of a paper read by Mr. Peter Squire before the recent International Pharmaceutical Congress, deserves careful consideration. We give one paragraph:

"Tincture of opium is of eight different standards, that of the United States Pharmacopœia lying between the two extremes, which vary nearly 600 per cent. In this case morphine is the active principle concerned, and opium itself varies in its percentage of morphine from one to over, or 2,000 per cent. Suppose the weakest tincture be made of the poorest opium permitted by the Pharmacopœia, of which it is official, and the strongest tincture be made of the strongest opium! To carry it into practical application, let us suppose that a Norwegian bring with him to this country a prescription containing tincture of opium, which he desires to have put up. He invariably got a preparation in his own country which contained from .9 to 1.1 per cent. of morphine. In the United States he may get a tincture of opium containing from one to 1.6 per cent., which would not only be within the limits of the U. S. Pharmacopœia (which allows any opium of more than 10 per cent. morphine strength), but within the common limits of good commercial opium such as is bought and sold constantly. In one case we might take one-eighth grain of morphine at each dose, and in the other twice as much. An American taking a similar prescription to France, would be almost certain to get a tincture of opium twice as strong as the one he had been using here if the French pharmacist who dispenses the prescription happens to overlook the fact.

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MERELY A SUGGESTION ABOUT THE TRIAL OF GUTEAU.

Why not give Guiteau all the advantages that science has placed within our reach, and accord him justice on a scientific basis? There is no reason for denying him the aid that the most recent science has given. Benedikt in his *Anatomical Studies of the Brains of Criminals*, shows that by comparing the brains of certain criminals which he has had the opportunity to study, that there was a constant atypically conformation, so well known indeed, that he ventures to assert that a defective, atypically constructed brain cannot function normally.

For instance, a marked feature of the criminal brains examined was that the *cerebellum* was not covered by the *occipital lobes*. Let this be made a test. Put the matter in the hands of a careful and skilled anatomist. If it turns out that this asymetry is proved, give the poor fellow a chance for his life, if the dissection should not be successfully done, why—science would have one more martyr.

A New Instrument—The Vein-Brooch in Varix.—At a recent meeting of the Clinical Society (*Lancet*, Vol. I., 1881, p. 561) Mr. Douglas showed an instrument of his devising, and which produced flat pressure on varicose veins and varicocele by means of a horn spatula, or one made of horn and steel, with a groove needle riveted to the eye-end and fastening at the point, after passing under the vein, by a catch like a brooch or safety-pin, giving very little pain, and (unlike the old torsion of wire or silk ligature) producing no constitutional disturbance, but obliterating the vein with certainty, and without subcutaneous division.—*Phil. Med. Times*.

Natural History of Leucoderma.—Mr. Squire (*Brit. Med. Jour.*, Vol. I., 1882, p. 499) gives the case of a patient in whom vitiligo appeared on the backs of the hands at the age of 38, and disappeared again at the end of six years. The course of this disease is rarely recorded.—*Phil. Med. Times*.

NOTES.

Purgatives by Hypodermic Injection.—It has been found (*Paris Médical*) that hypodermic injections of aloin (the alkaloid of Socotrine aloes) will cause purgation when used in doses of one twenty-fifth of a grain. We can thus, by combining apomorphia and aloin, produce an action each way without having to introduce anything into the stomach.—*Phil. Med. Times*.

Drainage of the White House.—The *Sanitary Engineer* of the 15th October gives an account of the drainage of the White House. It is the report of an inspection made by Col. Geo. E. Waring, Jr., at the instance of Col. Rockwell, officer in charge of Public Buildings and Grounds. He reveals facts the public have long believed, and he points out the remedies. The *Sanitary Engineer* is doing a good service in acquainting the public with full particulars. There can be no excuse now for delaying the work of improvement, so that the Executive Mansion shall be made, in the language of the *Engineer* “at least reasonably safe to live in.”

Vaccination Preventive of Malignant Pustule.—At a recent meeting of the Académie de Médecine (*La France Médicale*, Vol. II., 1881, p. 138), M. Boutet, of Chartres, gave the experiments of a committee to examine into the preventive vaccination against charbon as practised in the ovine species. A number of sheep from two farms—some vaccinated, others not—were inoculated with a few drops of blood from a “charbon” patient. The first lot of nineteen sheep, taken from the stables of Alfort, which had been vaccinated by Pasteur, survived the inoculation. Of sixteen sheep from elsewhere, all but one succumbed, presenting the lesions of malignant pustule. The blood inoculated was taken from a sheep dead of malignant pustule some four hours previous to the experiment.—*Phil. Med. Times*.

Ulceration of the Womb.—Dr. J. Russell Reynolds, says: “Some years ago *ulceratio uteri* was the fashion, and applications of various sorts were made two and three times a week in order to cure a malady which some eminent men, in special practice too, said

did not exist. Lately I have rarely heard of this complaint; the disease has died a natural death, or has met with a violent end. But now, according to some authorities, there is scarcely any woman living whose uterus is where it ought to be. It is ante flexed, or retro flexed, or verted this way or that way, so that all kinds of contrivances have to be adjusted or readjusted in order to cure back-ache, vesical irritation, albuminuria, hysteria, and I know not what besides. Now, when this is all done by some one who knows with what he is dealing, and honestly deals with it, as many do, much good may be accomplished. But when imitators of the good workers take such cases in their hands, nothing but harm can follow. There is meddling and muddling of the most disreputable sort, and the patients after a time grow sick of it and give it all up, and get well; or they go on from bad to worse, and become chronic invalids, and a great trouble to themselves, their relations and their friends.

Dr. J. Russel Reynolds in an address before the Medical Society of University College London, says of *Specialism* :

“If you ask me what I mean by specialism, I would say: ‘It is a morbid condition of the mind—of physician or surgeon, as the case may be—which shows itself in his regarding every patient who comes under his care as a sufferer from the particular disease which he has studied; of seeing the symptoms only from the point of view which he has assumed, and made quite clear—to himself—and of treating it in a manner which no one like himself understands; and of treating it to the utmost degree of attention, frequency, and specialty of treatment that his patient’s patience will endure.’”

The Effects of Oil of Tansy.—Dr. G. Jewett, *Boston Medical and Surgical Journal*, reports eight cases of poisoning with this drug: Case 1.—Fifteen drops at 11 A. M., teaspoonful, at 2 P. M.; convulsions, general cyanosis; recovery. Case 2.—Teaspoonful to promote catamenia; convulsions and death in one hour and a half. Case 3.—Unknown quantity to cause abortion; convulsions; death in three hours and a quarter; no abortion. Case 4.—Teaspoonful to cause abortion; coma, recovery; no abortion.

Case 5.—Four drachms ; spasms and death. Case 6.—To cause abortion ; rapid death ; no abortion. Case 7.—Decoction of tansy leaves to produce abortion ; paralysis ; coma ; death in twenty-four hours without abortion. Case 8.—Infusion of leaves daily for a week ; also for vaginal injection ; abortion, metritis, peritonitis ; recovery after three months. As druggists are often asked for oil of tansy under various pretences, we believe the above table will be useful in reminding them of the dangers attending the sale of tansy and its preparations.—*British Medical Journal*.

An Old Treatment of Dysentery Revived.—Mr. Henry Colley March (*Med. Times and Gaz.*, Vol. I., 1881, p. 319) says that in the ordinary dysentery of adults with some fever, much griping, constant attempts at stool, with tenesmus, the evacuations consisting of bloody and shreddy mucus, without any proper fecal matter, the proper procedure is to give every half hour half a minim of the liquor hydrargyri bichloridi (B. P.). The first dose will sometimes relieve the pain ; in a few hours the tenesmus ceases, and on the second or third day healthy stools make their appearance. Mr. March looks upon the remedy as the perfection of medication as a specific tonic.—*Phil. Med. Times*.

New Sources of Quinine.—Although the profit on cinchona plantations is said to be from 70 to 80 per cent., cinchona growers in Ceylon and the East Indies, will, the *Pharmaceutical Journal* thinks, need to look closely into the cost and possible profit of their plantations, since they may soon have to compete, not only with the government plantations, but with enterprise in Bolivia. In 1878, a few private individuals tried the experiment in that country of cultivating the cinchona tree, and now, according to the report of the Dutch Consul, there are on the banks of the Mapiri, at La Paz, four or five hundred thousand young trees of two years' growth. In other places also, new plantations are springing up, chiefly on the mountain slopes, which are cultivated for three-fourths of their height. The cultivation of the cinchona in its original home is, of course, easy, the chief danger being from drought or ants during the first two years, and the only labor necessary is to keep the young plants from weeds during the same time. To give shade to the

seedling plants bananas are planted between them. Already excellent yellow bark from Bolivia has been sold in this country, and cultivated South American red bark, yielding three per cent. of sulphate of quinine, has lately appeared in the London market.—*British Medical Journal*.

Action of Bromides in Epilepsy.—Dr. A. Hughes Bennett (*Edinburgh Medical Journal*, March, 1881), in an interesting paper, sets out the following conclusions: 1. In 12.1 per cent. of epileptics, the attacks were completely arrested during the whole period of treatment by the bromides. 2. In 83.3 per cent., the attacks were greatly diminished both in number and severity. 3. In 2.3 per cent., treatment had no apparent effect. 4. In 2.3 per cent., the number of attacks was augmented during the period of treatment. The form of the disease, whether it was inherited or not, whether complicated or not, recent or chronic, in the young or in the old, in healthy or diseased persons, appeared in no way to influence treatment, the success being nearly in the same ratio under all these conditions. 6. In 66.6 per cent., there was no trace of bromide poisoning. In the remaining 33.4 per cent., this was observed in varying kinds and degrees; but in no case to any serious extent—namely, physical weakness in 28.5 per cent.; mental weakness in 18.8 per cent.; and the so-called bromide eruption in 16.6 per cent.

SPONTANEOUS COW-POX AND HORSE-POX IN MASSACHUSETTS—VACCINIA.—With regard to the vaccinia of Cohasset Dr. Martin said that after having been disappointed some thirty times in investigating what were supposed to be epidemics of vaccinia some cases were reported to him by Dr. Cushing. Having been so often disappointed he declined to go see them, but asked that some of the crusts should be collected and sent to him, that he might test them. The crusts were sent, and though he had no faith in them, there being in their appearance nothing indicative of vaccinia, he made six inoculations with them into a heifer. At the end of a week one vesicle had appeared. With this six points were charged. Next day one child was vaccinated without any hope of result. A week later went to see the child and was astonished to find two very fine

vesicles peculiar to cow-pox. There was doubt as to the authenticity of the case. Dr. Martin then wrote again to Dr. Cushing and got one half a crust more. Eight inoculations into the heifer were made with this crust from which two vesicles were obtained. From these successful vaccinations were made. From the second remove fourteen vaccinations on children were made in one day and a vesicle in each case. These vesicles were very beautiful in every way. There is a great difference between the various original stocks of cow-pox virus, which can only be detected by an expert. The peculiarity of this was that on the eighth day the point of inoculation still consisted of a number of small vesicles which had not become confluent. Dr. Martin then went to Cohasset and found the disease at about the sixth day in one cow and at the fifth in another. The whole history of these animals was exactly consistent with that occurring in the milk animals generally. All the cows milked by hand were affected. Those suckling did not have it though it would appear about ten days after the cow had stopped suckling its calf. It never appeared on the dry cow or on heifers that had never borne calves. The disease is never found on any part of the cow except the roots of the udders.

Dr. Martin later visited another large dairy in Cohasset, where he found eight to sixteen cows with traces of the vesicle, the crusts being still adherent. Others had cicatrices; twelve to fifteen had been affected. He found, also, a man with a vesicle at the fourth day, which had been inoculated through a hang nail of the thumb. The local physician informed him that during the last five years he had had twelve cases of dairy men who had pustules on their hands.

There was no doubt that Dr. Cushing's cases were true cow-pox, and as such were very important and interesting.

Another interesting point with regard to these cases was that the history of the epidemic at Cohasset goes back several years. In 1872 Dr. Tarbell came to him and said that there was an epidemic in the dairies of Hingham. The cases occurred among half a dozen imported Jersey cows. From the history of the cases and position of the scars there was no doubt that these were cases of cow-pox. This takes the history back nine years.

There have been many cases of cow-pox reported in America, but in every instance the cases have been found to be

something else. If any authentic cases of vaccinia have ever been reported they are very rare. He did not think any ever had been reported in the United States.

The case of *variola equina* was of very great interest. Such a disease is so rare that the majority of writers deny its existence. Jenner said that the disease in the milk cow was inoculated from the horse, or at least stated that the virus was transmitted to the udder of the cow from the hands of a milker who had been taking care of horses affected with variolous disease. He thought he had discovered the connection between the variola of the milk cow and the diseased horses, but was never able to produce it by inoculation. Many times he took virus from the heels of greasy horses and inoculated other animals, but was never able to get cow-pox in this way. Other writers reported that they had made similar experiments and failed. Jenner was ridiculed. Another observer, however, had happened to come across a man on whose hands were vesicles looking like the vesicles of cow-pox. From these vesicles he took the responsibility of inoculating children, and produced a vesicle that could not be distinguished from variola pura. The animal was discovered, and from it children and heifers were inoculated, the disease thereby being produced. One of the plates of Jenner shows a child inoculated from the heel of a horse. These experiments, however, were lost sight of, and ridicule again brought against Jenner. At Paris horses were found with a fine eruption about the nose and nostrils, with pustules in the hair. From this children and young heifers were inoculated. A magnificent pustular eruption was produced in the child.

On the 9th of April, Dr. Martin was called to see a hostler at the Highland Railroad stables. The man was found with a very red face, which was not the redness of erysipelas but rather that about a very vivid vaccination. After washing the discharge from the nose a pustule was seen to be just inside the opening of the nostril. On further examination a pustule was found on the thumb of one hand and the little finger of the other. The next day, after washing the hands with ether, two perfect vesicles were found. The areolæ had just begun to appear, and had extended one-eighth of an inch. Some points were charged that day with clear pellucid fluid from the vesicles. Dr. Martin was fully convinced of the

character of the eruption that he vaccinated two children and a heifer, the inoculations being perfect in every case. The vesicle was perfect in form, and contained a small amount of fluid. Afterwards four points were charged, and from these eight magnificent and perfect vesicles were produced. On the heifers the inoculations produced characteristic vesicles.—*Boston Medical and Surgical Journal*.

Epsom Salts, Administration.—A considerable proportion of Epsom salts can be added to an effervescing draught of Rochelle salts without its disagreeable bitterness being perceptible. Preparations of this character have lately come largely into use.—*Am. Journal of Pharmacy*, September, 1881.

Compilation of Facts About a New Medicine (Powell's Beef, Cod Liver Oil and Pepsin)—A Superior Tonic and Nutrient—by Leading Practitioners. *Dr. Howard S. Paine, Albany, N. Y.*: I have tried it on myself; good results. I will recommend it professionally. *Dr. Edward A. Alcorn, Hustonville, Ky.*, I gave it to my daughter; disease phthisis; great wasting way. She took it with impunity, and received great benefit from its use. *Dr. A. M. Powell, Catawba, N. C.*: I tried BEEF, COD LIVER OIL AND PEPSIN (POWELL'S) on myself. I was broken down—nervous and liver torpid; results and relief beyond my expectation. I unquestionably recommend it. *Dr. C. H. Hepburn, Superintendent Indian Training School, Carlisle, Pa.*: My patients derive great benefit from its use.—*Exchanges*.

Relation of Renal Diseases to Disturbances of the General Circulation and to Alterations of the Heart and Blood-Vessels—Sir Wm. Gull, M. D., and H. G. Sutton, M. B.

1. Kidney-disease is associated with or causes changes in the circulation, heart, and blood-vessels variously, according to the kind and seat of the morbid changes in the renal tissues; for example, vascular (arterial or venous) or tubular or mixed (parenchymatous nephritis).

2. Kidney-disease may be dependent upon causes primarily weakening the circulation; for example, causes of general mal-nutrition, phthisis, fever, scrofulosis, alcoholism, syphilis, etc.

3. Defective renal function has a weakening influence on the circulation and nutrition ; tissues become choked by edema, enfeebled by anemia and uremia, and generally wasted ; for example, mottled or large white kidney, surgical kidney, etc.

4. Kidney-disease may be dependent upon causes primarily leading to the thickening of heart and blood-vessels generally, and to obstruction of the interstitial circulation through the several tissues ; for example, arterio-capillary fibrosis, climacteric changes.

5. The question as to the effects of kidney-disease on the circulation may often with advantage be reversed, namely, as to what is the influence of alterations in the circulation in producing kidney-disease ; for example, abnormal venous tension, arterial tension.

6. Many of the changes in organs hitherto considered uremic are referable to tissue-changes capillary and interstitial, atrophic, anemic, effusive, fibroid, etc., and may be independent of defective renal excretion.—*American Practitioner*.

The United States Still Ahead.—The following is said to be the proportion of physicians to each ten thousand inhabitants in various countries :

France.....	2.91
Germany.....	3.21
England	6.06
Austria.....	6.10
Italy.....	6.10
Switzerland.....	7.06
United States.....	16.24

Eight times as many physicians in the United States to the thousand inhabitants as in France ! This would almost seem to confirm the statement of a humorous lawyer at the Louisville bar who said that out in Bullitt county where he was raised, doctors were so thick that they rode two on a horse ; and once when a flat boat rounded to for the night on Salt River, that before morning two medicos had nailed their shingles to the mast-head.—*American Practitioner*.

THE EASY ADMINISTRATION OF MEDICINES.

Dr. G. F. Meeser, of Philadelphia, Pa., says : The “easy administration of medicine” is a subject requiring the careful and thoughtful attention of physicians, as well as of interest for the convenience and pleasure of the patient. The advancement of homœopathy in certain sections of the country has depended, to a great extent, upon the easy and pleasant doses administered by followers of that school. The elegant pharmaceutical preparations compounded by the tasty and skilled chemist and pharmacist have done much to rob the physician’s prescription of its terror and render the medicine palatable to the delicate patient.

Very recently, a new and important class of medicines has been introduced by the ingenious and enterprising house of Messrs. William R. Warner & Co., of this city, denominated “Parvules.” They bear evidence of exquisite taste and skill, and I have seen nothing of late which seems to supply a necessity so perfectly as they do.

“The list of “parvules” prepared and kept in stock by this house comprises thirty-eight varieties. These “parvules” are, for the most part, composed of simple substances in minute globular form, less in size than granules, and are sold in small vials suitable for pocket cases. They are convenient, portable, and easy of administration. The giving of small doses at short intervals, say every hour instead of every two or three hours or three times a day, produces a more salutary effect.

The question of the ready solubility of these “parvules” claimed my attention, and this I proved to my perfect satisfaction by placing those containing camphor, etc., in the mouth and then observing the effect.

I have seen nothing to please me more than these ready prepared doses. I can give four parvules of aloin, each containing one-tenth grain, at bed time or any time throughout the day, and get the full purgative effect desired without nausea or pain. I give these one at a dose, three times *daily, or occasionally*, for habitual constipation, with the utmost benefit. When liver troubles also occur, I give parvules of podophyllin, each containing one-twentieth grain, given every hour for five doses, produces bilious evacuations, equal to ten grains of calomel as ordinarily administered.—*Virginia Medical Monthly*.

BOOKS AND PAMPHLETS RECEIVED.

Medical Communications of the Massachusetts Medical Society. Vol. XII. No. VII. 1881. Pp. 255—VI.

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Artificial Anæsthesia and Anæsthetics By Henry M Lyman, A M, M D New York: Wm Wood & Co, 27 Great Jones St 1881 Pp 338

A Practical Treatment on Hernia. By Joseph H. Warren, M. D. Second and Revised Edition. Fully Illustrated. Boston: James R. Osgood & Co. 1882. Pp. 428.

The Science and Art of Midwifery. By William Thompson Lusk, A. M., M. D. With Numerous Illustrations. New York: D. Appleton & Co. 1882. Pp. 687.

A Treatise on Albuminuria. By W. Howship Dickinson, M. D., Cantab. Second Edition. New York: Wm. Wood & Co., 27 Great Jones Street. 1881. Pp. 300.

General Medical Chemistry for the Use of Practitioners of Medicine By R A Witthaus, A M, M D New York: Wm Wood & Co, 27 Great Jones St 1881 Pp 443

A Treatise on the Materia Medica and Therapeutics of the Skin. By Henry G. Piffard, A. M., M. D. New York: Wm. Wood & Co., 27 Great Jones St. 1881. Pp. 351.

Diseases of the Bladder and Prostate Gland Sixth Edition Revised by Walter J Coulson, F R C S New York: Wm Wood & Co, 27 Great Jones St New York: 1881 Pp 393

Sixth Report of the State Board of Health of California For Year Ending June 30, 1880 Sacramento: State Office, J D Young, Superintendent State Printing 1880 Pp 136

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Walsh's Physicians' Handy Ledger A Companion to Walsh's

Physicians Combined Call Book and Tablet Published by Ralph Walsh, M D, 232 C Street Northwest, Washington, D C Price \$3 50 Pp 600

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, A. M., M. D. Forty-Eight Plates from Life, colored by hand. Parts 10, 11 and 12. New York : E. B. Treat, No. 757 Broadway. 1881.

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ORIGINAL COMMUNICATIONS.

SURGICAL CLINIC.

GUN-SHOT WOUND OF FOOT—STRICTURE AND ULCERATION OF THE
RECTUM.

By R. A. KINLOCH, M. D., Professor of Surgery, Medical College,
State of South Carolina. January 25th, 1881.

Reported by DRs. DUBOSE and DAWSON.

GUN-SHOT WOUND OF FOOT.

The first case I bring before you is that of a gun-shot wound, recently admitted into the hospital. As is often the case with this class of patients, he has waited too long before applying for relief. The wound is situated on the dorsal surface of the foot, over the course of the *dorsalis pedis* artery. On examination, we find an orifice of entrance, but none of exit, or, in other words, the ball is embedded in the structures of the foot. On probing the wound, we find, that its direction is downwards, outwards and forwards. The reason I use a small probe in this case and not a large one, as is the rule, is because, the orifice is large, the wound open, and there is very little cellular tissue in this region to engage the point of the

probe. The probe comes in contact with something, but I am uncertain, whether it is the ball, or a fragment of a metatarsal bone. I used Nélaton's probe just before the lecture, but got only negative results. And here, again, you see no marks on the porcelain. A good rule to adopt is to make counter-pressure, opposite the orifice of entrance, to feel if the ball may not have stopped just short of the integument, but in this instance, I can feel nothing of the kind. I will enlarge the opening on a grooved director to guard against cutting the *dorsalis pedis* artery, which is in close proximity and may have already been divided by the ball. If I do happen to cut it, it will only be necessary to apply a ligature. My finger is now upon the foreign body, which, as I supposed, is a fragment of a fractured metatarsal bone. I can feel a roughness on both sides. Here also is the ball, which I remove, along with these splinters of bone. The metatarsal bone has been pretty well shattered and I will break off the *spiculæ*, with an elevator. In this region the ends of the bones cannot be turned out and resected. As the ball and portions of bone, which would act as foreign bodies have been removed, the wound will be treated on general principles. The foot is a bad place for injuries, as abscess, cellulitis and other complication, are apt to ensue. As it is now four days since the accident happened, these dangers are very much enhanced. The wound will be syringed out with carbolized water and granulation from the bottom, will be insured, by use of a tent. The patient will be carefully watched and if the pus is found inclined to burrow, a counter-opening will be made to give it free exit.

STRICTURE OF RECTUM.

The next patient, is one with some trouble about the rectum. This is the fourth case of this nature, that I have brought before you this winter. One with an abscess in the recto-ischiatic fossa, a second with fistula in ano, and a third with hemorrhoids. The patient before you, has a stricture of the rectum. The symptoms are very marked. She complains of pain in defecation, and tells us, that a muco-purulent discharge escapes constantly from her anus. There is a constant desire to go to stool and when she does so, there is considerable pain. She tells us also, that she suffers and has suffered for some time from indigestion. On exploring the rectum with the finger (at a previous examination) which should always be

done in these cases, I felt a distinct obstruction a short way up the gut. This obstruction is in the form of a ring, which gives great pain on being touched.

Stricture of the rectum, may be a very simple disease, or on the other hand, it may be a very serious one. The stricture may be met with as a fibrous bridle on the posterior portion of the intestine, or again, it may be an annular constriction through which you can only force your finger. The calibre of the tube above the stricture, will be found to be as large, if not larger, than it should be and filled with *fæces*. There is generally some digestive trouble and constant constipation. The patient complains of frequent desire to go to stools and pain in defecation. The *fæcal* matter may be flattened or ribbon-like in form, but take care not to make a diagnosis solely from this, for it may be caused by pressure of the uterus in the female or an enlarged prostate gland in the male, or it may be due to an irregular contraction of the sphincter muscle, and sometimes you will find patients with digestive troubles, presenting these ribbon-like stools in whom no organic cause for this appearance can be detected. The causes of stricture are numerous. If your patient present a healthy constitution, the stricture may be due to dysentery. This dysentery causing ulceration of the walls of the gut, and subsequent contraction; plastic exudation may occur and this exudation becoming organized forms the constriction. Or, again, habitual constipation may bring about a like result, *scybalaë* causing a similar ulceration and constriction. This above form of the disease is spoken of as simple in contra-distinction to other forms which have a specific cause. There may be syphilitic ulceration, or the disease is very often of cancerous origin. The gut is eroded very high up and bleeds easily, the same mucus discharge exists in a greater degree. The other specific causes are syphilis and gonorrhœa. The ulceration may arise from direct contact of the venereal poison, the pus being conveyed from the genitals to the anus, or as is more commonly the case, it may be due to secondary or tertiary syphilis. The stricture will in time obstruct the passage of fecal matter. The *fæces* caught above the stricture act as an irritant, and cause the muco-purulent discharge. The patient applying for relief is very apt to say that he suffers from dysentery, but you must not allow this to misguide you. I remember a case of this kind. A lady, the wife of a distinguished divine, suffered for some time

from what she termed a *dysentery*. She consulted many physicians at the north, who failed to afford her relief. She then went to Europe in foolish search of medical aid, with no better result. She was sent to Mineral Springs. Finally she came accidentally here to this obscure point and consulted me. I made an examination as the first step, and found that her trouble was stricture of the rectum following the dysentery. Her physicians had depended on her own diagnosis, and not one of them had made a rectal examination. The stricture yielded to treatment, and she materially recovered. I mention this to show you how even educated surgeons may be careless and are thus sometimes misled, and also to impress upon you the necessity of always making a rectal examination in cases of this nature.

With regard to the patient before us, the house-surgeon tells me that there is a cicatrix in the groin, which may mark the seat of an old syphilitic bubo. We find some ulceration around the vagina, and here is an indication of a deep ulceration of the labia. These cicatrices, I think, are the result of venereal. The lower part of the vagina contains fecal matter, which points to a recto-vaginal fistula. With the probe, I find an opening and when the stricture is divided, I will see if it communicates with the rectum. There are some slight vegetations around the contour of the anus, and as they are in the way I will remove them. They look like hemorrhoidal remains, which have existed a long time.

As to the treatment, if the patient is seen early, the stricture may be dilated, just like a stricture of the urethra. If the stricture is of long standing and refuses to dilate, then it must be divided. If the stricture is ring-like in form, then you may pass in a probe-pointed knife and nick it, in three or four places, tear it somewhat with your finger, and then dilate with rectal bougies. These bougies are very similar to the urethral sounds. They vary in size from a large urethral sound, to a cylinder of an inch in diameter. A very convenient mode of dilatation is, by water-pressure. The instrument is merely a catheter, with an orifice about its middle, which is covered by a rubber shirt. Water is forced into this catheter with a syringe. The rubber bag is thus dilated, and if the end of the catheter is plugged, you have a very convenient form of equable pressure. Instead of nicking the stricture, a free incision

may be made through it. You pass in your finger and on this, as a guide, a probe-pointed bistoury is passed, and a free incision downwards, and backwards, towards the coccyx is made. The rectum is then washed out thoroughly with some emollient, as flax-seed tea, when all acute action has subsided, the stricture is kept open and dilated with bougies. This form of treatment is only applicable in simple strictures. When the disease is specific, an operation can only give temporary relief but the patient may be made to pass a bougie every other day, and in this way gain relief from a great deal of pain and annoyance, and enable him to lead a much more profitable, and comfortable life.

The patient now being chloroformed, I will proceed to divide the stricture, by a free incision, which, I think, is most applicable in this case. The intestine is, as expected, dilated above and crowded with fæces. I now pass the probe into the fistulous opening in the vagina, but I cannot feel it enter the rectum. I will not push this too far, as it would only serve to satisfy our curiosity, and no good would result if we did find a fistulous opening. The patient will be given an anodyne; a fourth of a grain of morphine injected hypodermically. Very often we use suppositories of cocoa butter, containing some anodyne or perhaps we may use tannin, or some other astringent in this form. But the most important indication is to keep the parts clean, by injecting some emollient, as flax seed tea or some local anodynes, or astringents may be injected. I am not certain that this patient suffers from a syphilitic diathesis for the numbers of the scars around the vulva, lead me to think, that they were chancroids, and not true chancres, the suppurating bubo, is more apt to be the effect of chancroids, than of a true or Hunterian chancre. We will watch the case, however, and if we have further trouble, I will put the patient upon iodide of potash, and mercury.

I had another case to bring before you of the same nature, but I will reserve my remarks on ulceration of the rectum unconnected with stricture, for a future occasion.

JANUARY, 28th, 1881.

ULCERATION OF THE RECTUM.

Gentlemen :—I bring before you to-day this patient, in order to complete somewhat my last clinic on diseases of the rectum.

The patient suffers from ulceration of the rectum which you remember I told you was often the cause of stricture. The commonest constitutional cause is syphilis, but struma and tuberculosis are also fertile causes. You know that fistula in ano is of very common occurrence in tuberculosis of the lungs, and some authorities tell us, that it should not be interfered with under these circumstances, for it acts as a kind of drain to the system, which if stopped will increase the lung trouble. These fistulæ-like strictures also result from ulceration. The ulceration in the case before us, is caused by a strumous or lymphatic diathesis. Its symptoms are much like those of stricture, viz : pain after defecation, a frequent desire to go to stool and the escape of a muco-purulent discharge, from the anus. There may also be a spasmodic action of the sphincter muscle and constitutional irritation. On exploring the rectum with my finger, some time since, I found an ulceration on the posterior wall of the gut, which is by far its commonest seat. Do not think that stricture of the rectum is always accompanied by a bad diathesis, for we frequently meet with it in robust persons, caused by a simple ulceration. This ulceration is most commonly met with at the verge of the anus, where the skin and mucous membrane come in contact. This ulceration is often so slight, that it escapes the notice of the surgeon and very often the female is treated for some disease of the uterus by mistake. Let this impress upon you how important it is to examine all the organs carefully, before making a diagnosis. The pain at times is intolerable, and nervous women may be thrown into convulsions on attempting to defecate. On close examination you may find a little ulcer situated on the posterior wall of the rectum, perhaps only a line or two in width, but quite deep. When the ulcer takes this form, it is called a fissure of the anus.

This woman has no fissure but I bring her before you for another purpose, to show you the modes of examining the rectum. You should always begin by exploring the parts with the finger. If the patient complains of a great deal of pain, as your finger passes the sphincter and there is a thin bloody discharge on the end of your finger when you withdraw it, you may suspect fissure ; but if the pain is complained of when your finger reaches a higher point, you may suspect ulceration of the walls of the gut.

There have been various instruments invented in order that you may see the walls of the rectum, and thus obtain a more complete knowledge of the nature of the ulcer. The instrument that I prefer for this purpose, is Sims' vaginal speculum. You introduce the blade of the instrument into the anus and gently pull the wall of the gut backwards, toward the sacrum, this enables you, with the aid of direct sun light (or of a lamp) to see the anterior wall. If you want to see the posterior wall, you simply turn and pull the instrument in the opposite direction. You may use the fenestrated speculum, but it has disappointed me, whenever I have tried it. If the ulcer is small and circumscribed, you may succeed with this instrument in bringing it into view, but not otherwise. The anal speculum proper, is merely a dilator, with two blades, which are separated by means of a screw attached to the handles. The instrument may be used as a dilator, when we have cut a stricture and cannot open it with the finger. The instrument is passed in and slowly opened, until the requisite dilatation is attained. A very convenient form of dilator, is the simple glove stretcher, with which you are all acquainted. It meets all the necessary indications and you may tear open a stricture with it, instead of cutting, when the patient objects to the use of the knife.

As to the patient before us, I have not examined her for a long time, but the house-surgeon tells me that she has improved. On looking at the contour of the anus, you see the remnants of some old hemorrhoidal tumors, which do not amount to anything. There is a small ulcerated spot on the verge of the anus, but this is nothing compared to the extensive ulceration, which existed within the rectum, when I last saw her. On inserting my finger I feel a ridge, not a stricture, on the posterior wall of the gut and there is a little depression below it. The anterior wall feels natural. I cleanse the parts with a probang of cotton, which must always be done before using the speculum. With Sims' speculum, I see an ulceration on the posterior wall, which looks healthy. The patient is greatly improved. You may use the speculum in applying local applications to the ulcerated surface. These local applications are often very beneficial in stimulating the parts to more healthy action. You may use nitrate of silver or nitric acid, but I prefer pure carbolic acid to these. You merely mix the acid with a little glycerine or water,

until it has a fluid consistency and apply it to the ulcerated surface, taking care to apply a little oil immediately afterwards, to prevent the acid from attacking the surrounding parts. But these applications are not the most important part of the treatment. Cleanliness must be scrupulously observed and the rectum should be washed out with warm water, after each action of the bowels. Laxatives must be administered and I know of no better than compound liquorice powder of the German Phar. If the pain is great, local anodynes in the shape of suppositories of opium or morphine, to which are added some of the vegetable astringents as rhatany tannic or gallic acid, should be ordered. These may be introduced with the suppository tube, which is a small tube in which the suppository is placed. It is inserted into the rectum and the suppository is then driven out by a piston. You must at the same time build up the patient's health and correct any diathesis which may exist. In fissure of the anus, you must apply nitrate of silver freely or what I prefer, strong nitric acid. If these fail to produce relief, then you must have resort to more active measures. Pass in a probe pointed bistoury, and cut through the fissure. If there is great pain and nervousness, the relief will be magical. The old authors taught, that in operating for fissure, you should cut through the sphincter, as in fistula, but very often cutting through the base of the fissure will suffice, and by means of a tent, we make the wound granulate from the bottom. I would advise you always to commence with the milder treatment, as the application of nitric acid first, if this fails, try cutting through the base of the ulcer and if this does not afford relief, then cut entirely through the sphincter. I have varied the treatment slightly in this case, for I have added iodoform to the suppositories, a substance, which is very useful as local application to ulcers and which seems to have some influence over the nerves of the part, which we do not understand. Under this treatment together with frequent washing of the rectum, the patient has improved greatly.

Haller's tripod of life was the heart, the lungs and the brain. One leg of this tripod gone, and that which the three carry inevitably falls.

SIMULTANEOUS GROWTHS IN THE LARYNX AND
 ŒSOPHAGUS—SUDDEN CESSATION OF RESPIRATION
 —TRACHEOTOMY WITH A PENKNIFE—PERFORATION
 OF THE LEFT PULMONARY ARTERY BY A SOFT-
 ENED GLAND—DEATH SIXTEEN DAYS AFTER THE
 OPERATION—STRICTURE OF THE ŒSOPHAGUS.

A Clinical Lecture Delivered at the Hospital of the University of
 Pennsylvania, October 29th, 1881.

By WILLIAM PEPPER, M. D.

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WM. H. MORRISON, M. D., for the NORTH CARO-
 LINA MEDICAL JOURNAL.

GENTLEMEN :—I bring before you to-day the specimens from a woman who died a few days ago.

Before proceeding to examine them, let me give you her history as far as we were able to obtain it. She was 38 years old. She had never had syphilis and was free from any known hereditary disease, the first trouble complained of was neuralgia of the scalp. Since June last, she had a short hacking cough, and an increasing sense of dyspnœa. Since about the middle of August there was added to this, difficulty in swallowing, which at first prevented the taking of solids, and later made it difficult to swallow even liquids. There was no affection of the voice. Observe then that there was no aphonia.

The symptoms had been increasing and she was on her way to the dispensary to be examined, when she was seized with an attack of dyspnœa and had a convulsion on the street in front of the hospital. When admitted, immediately after this, she was suffering from intense dyspnœa, and exhibited all the signs of tracheal obstruction. The dyspnœa yielded to simple treatment (external warmth and Hoffman's anodyne internally) and the woman became fairly comfortable.

It was impossible to make a thorough physical examination. There was short hacking cough with a muco-purulent expectoration containing blood. There was a feeling of soreness over the chest.

The thyroid gland was slightly enlarged and hard. An enlarged gland was also found at the left angle of the lower jaw. Auscultation along the trachea revealed a stridulous sound on inspiration. Examining the chest posteriorly there was also found a stridulous sound apparently, carried from the trachea, and some dry râles. On percussion there was exaggerated resonance. The head was found to be healthy. On auscultating the spinal column while the patient swallowed, a gurgling sound was heard from the sixth cervical to the first dorsal vertebra. This was most distinct at the seventh cervical.

The day after admission while the trachea was being auscultated she was again seized with a spell of dyspnœa, followed by spasmodic movements of the body and momentary cessation of respiration, indeed it was a permanent cessation of respiration.

I was in the hospital at the time and Dr. Curtin told me that the woman had suddenly stopped breathing. Artificial respiration had been tried without apparent success. I immediately went up stairs and found the woman apparently dead.

Now let me see what we have learned from a consideration of the case. There had been increasing difficulty of breathing with stridulous respiration, and increasing difficulty of swallowing, but no aphonia. We should all have thought from these symptoms, that in all probability, the woman had an aneurism of the arch of the aorta, pressing upon the œsophagus and trachea. This would have explained all the symptoms. But the examination of the chest showed that the heart was healthy and did not reveal any aneurism of the aorta.

In obstruction of the larynx from an intra-laryngeal tumor, the voice is usually more affected than it was in this woman and it is difficult on this supposition to explain the progressive difficulty of deglutition, and the symptoms of pressure and obstruction at the level of the seventh cervical vertebra, unless one of two conditions was present, either the tumor was so large that, while it involved the walls of the trachea, it also pressed backwards upon the œsophagus, in which case we should have expected to find a more marked tumor in the neck, or else, there was present that very rare condition of simultaneous growths in the larynx and œsophagus.

Let me now return to the case. As I said before when I reached

the ward, the woman was practically dead. She was cold, pale, the jaw had dropped, the eyes rolled up. Dr. Schweinitz was laboring to restore the respiration by elevating the arms to produce inspiration and pressing on the chest to cause expiration, but there was no evidence of any return to life. The artificial respiration had been kept up for several minutes. I immediately sent for Prof. Ashhurst who was in the building, but without waiting for his arrival I performed a hurried tracheotomy with my nail knife, enlarged the opening first with a hair pin and afterwards, by expanding the blades of a pair of scissors in the wound. Air immediately entered and in a short time the woman slowly revived. Prof. Ashhurst then arrived and a silver tube was inserted.

The woman did fairly well until October 20th. The operation had been performed October 11th. She then had an attack of dyspnoea followed by difficult breathing. The temperature ran up, the pulse was rapid. There were evidences of hypostatic congestion of the lungs, and later of pleural effusion on the right side. She died October 27th at 1 P. M.

It had been impossible to examine the woman carefully during all this time, but it was very clear that she was hopelessly ill with organic disease. When I put this little knife into her trachea, which I did with one thrust, with the back downwards until I felt the cartilages yield and then cut upwards, I was struck with the violence with which I felt the pulsation of the heart against the back of the knife. It made me suspect an aneurism of one of the large arteries of the neck.

Let us now turn to the specimen. Here is the thyroid body which is a little enlarged and hard. Here is the upper portion of the trachea with the opening made at the time of the operation. This opening enters just at the point where a tumor springs from the posterior wall of the trachea and occupies a considerable portion of the lumen of the tube. I show you this singular looking tumor. The upper portion resembles a tongue in shape. When it falls down in that manner, it closes the trachea, but when I raise it up, it leaves an opening large enough to admit sufficient air. This was in all probability one cause of the frightful attacks of dyspnoea. Passing downward this tumor involves the posterior wall of the trachea ending below in a ridge and above in this curious cock's-comb or tongue-like process. The whole tumor is not less than two

inches in length and one inch in breadth. I cannot pretend to pronounce as to the character of this growth. It must be submitted to careful microscopic examination.

Here then was the immediate cause of the frightful attacks from which this woman suffered. You will observe that the arrangement of this growth explains the great peculiarity of her attacks. The growth is entirely below the vocal cords, which are perfectly movable and only slightly thickened. When this little valve-like process was erect, air passed freely through the trachea and the current was strong enough to produce good phonation; but when it fell down, not only phonation but also the breathing was entirely suspended.

This mass is not, however, large enough to explain the permanent and mechanical impediment to swallowing which was a prominent symptom. I shall now lay open the œsophagus along its posterior wall and I find it the seat of growths similar to that in the larynx. Here is a mass about the size and shape of an almond, three-fourths of an inch long and one half of an inch wide; around this there are a number of fungous growths occupying no less than three inches of the œsophagus through half of its circumference. Below this we have a few points of disease.

Here then we have the most rare disease of simultaneous intralaryngeal and œsophageal growths, explaining nearly the dual condition of progressive mechanical dyspnoea and progressive mechanical dysphagia; and accounting fully for these symptoms without the presence of an aneurism which would have been the more natural supposition, for you know how commonly an aneurism of the arch or of the descending aorta will press upon the trachea and œsophagus, causing difficult breathing and deglutition that must never be lost sight of.

Let us turn for a moment to the lumps. On the left side, I feel normal crepitant tissue throughout here; is an enlarged bronchial gland, highly pigmented and cheesy. We often find bronchial glands in this condition with a black layer outside and cheesy matter inside. That gland has been inflamed in consequence of a catarrh of the lung, a pneumonia probably. Following the inflammation it has passed on to cheesy degeneration; the organic matter has been absorbed, leaving behind this dry, partly calcareous residue. On the right side I find another gland considerably enlarged.

On the right lung there extends a shaggy layer of lymph binding the lobes together. The false membrane is of comparatively recent date. There was found on this side a little over a pint of pleural effusion.

The heart is tolerably small. The walls of the left ventricle are firm and of the normal thickness. The mitral valve is a little thickened but not enough to cause roughness. It is large enough to completely close the orifice. On the right side the tricuspid valves are perfectly normal.

The pulmonary artery presents a most extraordinary lesion. One that I have only seen once or twice in my life. This black bronchial gland has been adherent to the left branch of the pulmonary artery and has excited inflammation of its coats, this has gone on to ulceration and perforation. The coat of this vessel for half an inch of its circumference, is softened and very thin. By holding it towards the light, I can see through it. In the centre of this space there is an opening about one line in diameter. This accounts for the f. $\bar{\epsilon}$ 16 or f. $\bar{\epsilon}$ 17 of liquid blood which was found in the left pleural cavity at the autopsy. There is a soft shreddy clot in the pulmonary artery which I shall not disturb as I do not wish to injure the specimen.

The ductus arteriosus (the duct which connects the aorta and pulmonary artery during intra-uterine life) is very long in this case, but on examination I find, as we should have expected, that its cavity is obliterated. The aortic valves are normal.

Once before I have met with this lesion of the pulmonary artery. It occurred in a child with scrofulous disease of the bronchial glands situated on the primary bronchus had undergone cheesy degeneration and had softened. As the matter approached the surface, adhesions were formed and it opened into the pulmonary artery. Death resulted in a few hours. At the autopsy, a gland as large as my finger, was found with the cavity filled with softened matter and a little perforation leading into the vessel.

For two days before her death, this woman complained of agonizing pain in the left side. This was so severe that we had to use hypodermic injections of morphia. This was undoubtedly simultaneous with the extension of disease to the branch of the pulmonary artery and the rupture of the vessel.

This woman's death has apparently not been due to anything connected with the original trouble. Looking back on the case we see that she never could have gotten well, and if she had lived it would have been a life of suffering and distress.

The lesions in this case are of the rarest and most interesting character; the clinical history though imperfect is very interesting, and the results of the operation done in such a hurried manner, highly satisfactory and very instructive to us as showing that mechanical dyspnœa due to a cause operating at a point above the lowest point at which we can operate, is a supreme indication for tracheotomy. It made no difference what was the matter with this woman, the fact that there was obstruction about the lowest point at which it was possible to operate, made it imperative for any bystander to open her trachea. This will often give immediate relief and sometimes be followed by a cure. I have been obliged to perform tracheotomy under such circumstances, a number of times. Twenty years ago I opened the trachea of a man apparently dead. He is living to-day. After all the manifestations of life have passed away, the patient cold and pulseless, after the failure of artificial respiration, the admission of a little air will recall all the manifestations of life and the patient will revive. When questioned, as I have had an opportunity of doing, they will declare that they have no recollection of anything unpleasant, or if they can recollect anything, it is that they passed into a quiet sleep with pleasant dreams.

STRICTURE OF THE ŒSOPHAGUS.

This man comes to us to-day to be examined. If his statement be correct, he appears to be suffering from some form of obstruction of the Œsophagus. He states that he is a married man; has always been healthy; is not a hard drinker; has not abused himself in any way; and has never had any venereal disease. He does not recollect being injured in any way; he has not strained himself and never swallowed any acrid or corrosive substance.

About two weeks ago he noticed slowly increasing difficulty in swallowing. He had no actual pain only a feeling of discomfort. After the trouble had lasted two weeks, he could not swallow meat and after four weeks he could take nothing but liquids. He can swallow milk very well. He has lost a great deal of flesh.

Obstruction of the Œsophagus may be divided into spasmodic or functional and mechanical or organic. Where you cannot possibly suspect that the obstruction is simply spasmodic, but is really mechanical and progressive, the question comes up as to the seat and character of the obstruction. Is it due to pressure from without, or is it due to some growth in the Œsophagus itself? The very first question I should advise you to settle is, Whether there is or is not an aneurismal tumor of the thoracic aorta, or if there is not an aneurism, is there a solid tumor pressing upon the Œsophagus. I mention the aneurism first because that is a lesion which can be injured by your subsequent examination. If there is an aneurism dressing upon the walls of the Œsophagus, it may have become adherent to the tube and its walls have become thinned. Under such circumstances, if in your examination you passed a hard button through a close obstruction, it is not impossible that you might rupture the walls of the aneurism. I shall therefore decide this point before exploring this man's Œsophagus.

The pupils are of equal size. The radial and carotid pulse is the same on both sides. The heart's action is rapid but without murmur. No murmur at any point of the arch of the aorta. No dullness on percussion. No prominence and no pulsation along the course of the aorta in front. So far as the arch in front is concerned, we may eliminate the idea of aneurism in that situation.

Examining posteriorly we see a marked lateral curvature of the spine with its convexity toward the right, throwing the right shoulder and ribs far out. There is a compensating curve in the opposite direction in the lumbar region. The antero-posterior diameter of the left side, as is always the case in these curvatures to the right, is so contracted as to allow the heart sounds to come through more strongly than natural, but there is no evidence of aneurism nor of any solid tumor, there are no signs of obstruction to the veins of the chest.

I shall now auscult the Œsophagus while the patient swallows some water, but there is no gurgling sound produced at any point of the Œsophagus, as you would expect to find if the fluid passed through a distinct contraction.

I shall now try to pass this button (about half an inch in diameter). It passes without much difficulty.

The probabilities are then that this man has a prolonged disease of the Œsophagus. I mean by that, that the disease has involved the walls for a considerable extent interfering with the muscular contraction of the Œsophagus, but at no point is the tube so narrowed as to interfere with the mechanical passage of this button. This agrees with his statement that he can take milk readily, and as you have seen he can take a glass of water (half a pint) in three gulps. If there had been distinct constriction, I should have detected some gurgling during the passage of the liquid. The clear history that he gives us as to the difficulty of swallowing solids would also indicate that the Œsophagus was diseased through some extent, so that when the bolus of food reaches this point it cannot be seized by the muscles, sticks there and he is compelled to bring it up.

Even if this be the case, it does not help us particularly as to the nature of the case. In general terms, it may be said that when you have a mechanical obstruction of the Œsophagus and can exclude the idea of a tumor pressing from without and have decided that there is disease of the walls of the tubes, the obstruction is either due to traumatism, as the swallowing of some acrid or corrosive liquid ; or to syphilis, for syphilitic stricture is not at all rare, or it depends upon the appearance of a neoplasm of some type, papilloma, epithelioma, sarcoma or carcinoma. When a man 58 years of age, who says there has been no traumatism and no syphilis, complains of progressive, speedily increasing dysphagia without much pain, the chances are that the obstruction is due an infiltrated neoplasm ; involving the walls of the Œsophagus for a considerable extent and not projecting as a tumor into the Œsophagus, which would give rise to a higher degree of obstruction.

I noticed by this man's health that he had been taking whiskey and I rebuked him for it, but that was before I understood the nature of his case. There is no doubt that the man is right in taking a little whiskey. I am saying just what I mean. He should take half a teaspoonful or a teaspoonful of whiskey four times a day, milk, cream, strong meat broths, raw eggs and such articles of food. I shall again carefully examine the Œsophagus and if I find any serious obstruction, I shall dilate the Œsophagus and bring him before you in two weeks.

SELECTED PAPERS.

QUININE IN PREGNANCY.

By HENRY F. CAMPBELL, M. D., Augusta, Ga.

Abortivant Effects of Quinine.—At a period not very remote from the present, though I have not seen much concerning it of late, the medical journals of this country contained frequent articles discussing and most of them strongly asserting the *oxytocic* properties of quinine. The tendency and the precept of all these papers were to lead to the establishment of the opinion that the preparations of cinchona are not only inapplicable, but positively dangerous and subversive, in any and all the stages of pregnancy. Abortions, miscarriages, and premature labors were constantly attributed to its administration. Why this fusillade against this prominent and important article of the pharmacopeia should have ceased, I am at a loss to divine, unless upon one or other of two very different assumptions; either “the sword was sheathed for lack of argument,” as no one seemed to challenge the statements, or it was considered that the fact was too thoroughly established to require either reassertion or confirmation.

To this opinion in regard to the action of quinine under a proper, or in any degree prudent, application of the agent, my own daily observation for nearly forty years gives an unconditional denial. “Woe to her that is with child!” would it indeed be, to all the women of our malarial districts of the South, and in many portions of the West, did quinine, the daily and long-continued taking of which constitutes an important condition of their very existence, produce such calamitous results! The very suggestion of the circumstances, without argument, must certainly at once refute all charges against quinine as an oxytocic. We have only to be reminded of the thousands of pregnant women who must daily use the drug to prevent or to break the force of paroxysms of fever, and to know the fact that the question of such an effect never enters the mind of either patient or physician on its administration, to be fully convinced of the fallacy regarding its abortivant effects. Notwithstanding all that has been written on the subject, and though many of them are fully aware of the charges of oxytocic

properties made upon quinine, I do not know a single practitioner in the widely extended region of the South with which I am familiar, who is at all influenced by them or who would hesitate to administer quinine freely to a pregnant woman at any stage, as the very *sheet-anchor* of her safety in paroxysmal fever. Among the hundreds who prescribe it and the many thousands who take it under these circumstances, we might suppose that the barely casual observation of the doctors, or even the common sense of the people would long ago have discovered some connection between cause and effect had any such relation existed. I am particular to say here that miscarriages do, nevertheless, occur often in these regions that are in no way attributable to quinine, but rather the reverse. This, however, brings us to a different but very important examination of this portion of our subject. It should have a much more elaborate consideration than I am at present able to engage in.

The paroxysmal neuroses endanger the prosperity of pregnancy.

Many years ago I had occasion to tabulate the neuroses with the object of making a comprehensive classification of febrile diseases on the basis of the nervous system.* The definition then given to the neuroses will indicate the relation which paroxysmal fever—considered as one of them—may hold to the pregnant uterus as endangering the welfare of the fetus: “NEUROSES. Diseases in which any portion of the nervous system may be recognized as the *primary dynamic source of either their functional manifestations or of their structural changes.*”†

In this paper it will be found that paroxysmal fever of every grade and type is regarded as a paroxysmal cerebro-spinal neurosis, differing from neuralgia in the essential feature of pyrexia. Regarding then, every paroxysm of intermittent fever as a temporary *erithismic* condition of the cerebro-spinal nerves and centres, attended with aberrations of sensation and of motion,—ague-shake,—even to the extent of convulsions, as in infants, it is not difficult to estimate the liability of such paroxysms to excite abnormal contractions of the pregnant uterus; and in connection with these con-

*“The Nervous System in Febrile Diseases, and the Classification of Fevers by the Nervous System.”—Trans. American Medical Association, vol. xi., p. 549. Washington, May, 1858.

†Op. cit., Tabular Statement, p. 715.

tractions, the inestimable value of any agent which might lessen, or control, or entirely prevent the advent of a condition so hazardous to the continuance of pregnancy must be self-evident.

Many considerations which, as physiologists, some might engage in, present themselves as to *rationale* and as to direct and reflex instrumentalities; but I have placed the subject in such a relation, that, holding the views I have stated, the point to which I am tending is already obvious to all. It is this, that instead of withholding quinine from a fear that it may produce abortion or premature labor, I give it most punctiliously to *prevent abortion*, or rather to prevent the paroxysms and the attendant calamities—abortion among them—that are threatened thereby. In the classic bluntness of Dr. Gooch, “Take care of the woman and the womb will take care of itself.”

In paroxysmal fever, when the neurotic irritation is reflected upon the pregnant uterus, it will be observed that the uterine “pains” recur *with* the paroxysms of fever, and abate or disappear entirely during the remissions or intermissions. They may continue to complicate the paroxysms as long as they recur, and even for a considerable length of time, without ending in catastrophe. At other times, without any obvious general pyrexia, the woman may, each night, have pain in the back, aching of the lower extremities with recurring uterine pains strongly simulating the pains of incipient labor. During the entire day, there is generally an absence of the lumbago and aching of the limbs with perfect quiet in the uterus. The above sketch accurately describes a large number of cases tending threatened expulsion, for which I, and doubtless many others in the South, are often consulted. In both these classes of cases, the apyrexia as well as those in which there is general fever, I invariably resort to efficient doses of quinine during the intermission, and almost as invariably have I found every threatening symptom to disappear; relieving the mind as well as the body. The extreme result of such cases in actual expulsion of the fetus has but seldom been observed by me for the reason that even after many returns of such paroxysms of uterine pain, the administration of quinine arrests their progress and restores quiet to the pelvic regions. Without the administration of quinine, as above suggested, I should have but little confidence in arresting such pains or of preventing the

abortion often imminently threatened. My inquiries into the history of several of the abortions that have actually taken place—progress having advanced too far to be stayed—have developed the fact, that in more than one of them the accident had been preceded by nightly or daily paroxysms such as are above described.

A condensed statement from notes taken at the time exhibits the effects of the willful withholding of quinine when most grievously required, the opportunity of observing which was forced upon me. I was hastily called to a young lady from a malarious district. On my arrival, I was told by her married sister that she had been having “chills and fevers” every other night for more than a week, at which times she had been very restless, groaning often and in great pain. She stated that her present anxiety was occasioned by some inquiries which had developed the fact that no menstrual discharge had occurred for at least four months; but that now there being a slight show she candidly stated her apprehensions, and desired me to make an examination, that the family might know how to act. This examination was made at once, and at that time of the day, afternoon, when the pains had begun, as for a week or more, to come on. I found the abdomen somewhat enlarged, uterus slightly above the pubes, vagina relaxed and very moist, os tinæ soft and dilatable, neck not obliterated, of course, nor was there dilatation at the time of the recurring pains. The mucous discharge when examined was found to be decidedly tinged with blood. The case was clearly one of pregnancy at four months,—abortion from paroxysmal fever being strongly threatened.

Had this young lady been a wife desirous of offspring as heir to a boundless estate, according to my observation and experience, her best chance of being gratified would have rested in the free use of quinine carefully adjusted to the type of her paroxysms. Far advanced as the prodromata of miscarriage were found to be at my first examination, I believe the uterine disturbance would have been arrested and the continued progress of gestation secured by its faithful and judicious administration. No less faithfully in this case, than in one where offspring was most ardently desired, did I urge, as was my conscientious duty, the observance of the course I thought best calculated to prevent the catastrophe, namely, An enema of laudanum to quiet her present *uterine* pains, a strict

observance of the horizontal position in bed, and above all, *fifteen or twenty grains of quinine, each day in divided doses, to prevent the recurrence of the daily paroxysms* which I regarded as the one great cause of the present threatening. She listened most attentively to my discussion of the case with an apparent disposition at first to acquiesce in my advice, but in the end told me, with the flattest candor, that nothing on earth could induce her to obey my directions in the slightest particular. She said she was glad to know she was in danger of miscarriage, and that death to her was preferable to exposure. In this immovable determination I was not surprised to find that she was most strongly upheld by her sister and another member of the family, who was cognizant of the deplorable facts of the case, and who took in very fully all the bearings of my prophylaxis.

On the second night, I was called again to the case. I found her with only a moderate degree of fever, but suffering with what appeared to be labor-pains, which recurred at intervals varying from twenty minutes to an hour. There was but little alteration in the condition of the os during the pain, though I thought the cervix had been slightly shortened, and there was more dilatability and softness of the mouth of the womb. I urged quinine again,—now merely *pro forma*. The pains entirely disappeared and did not return again till the second day after, when I was called in the middle of the night. I found quite a full dilatation of the os with an arm protruding into the vagina; delivery was easily accomplished by manipulation. The fetus was one of nearly six months and still born. After the expulsion of the fetus quinine was freely prescribed to break up the paroxysms and faithfully taken. The young lady made a good recovery, with no bad results of any kind, so far as I know, accruing from the narrowness through which she had passed. I believed then, as I do now, that quinine would have prevented this miscarriage. Even as an army surgeon I have never used “military authority,” and much less *force*, to compel any adult of sound mind to take medicine, or to submit, against his will, to an operation. Some of the rights of patients are inalienable. The exercise of free will, in such cases, I believe to be one of them.

The pyrexia conditions under which quinine is given in malarial paroxysms, complicating pregnancy, I have not thought necessary

to illustrate by the rehearsal of individual cases. It has been distinctly and undeniably stated that pregnancy, so far from being a bar to its administration,—especially where abortion, or miscarriage, or premature labor is threatened,—becomes the one most imperative indication for its effectual exhibition. I think I shall be indorsed in this statement by nearly all practitioners of experience in the malarial regions of this country.

Apyrexia paroxysms of a local or general form often threaten the continuance of pregnancy.

But it is not alone in the well-marked paroxysms of malarial fevers, where “the cold, the hot, and the sweating stages” succeed each other in classic order, that the integrity of the gestative term is imperiled. Apyrexia neuroses of a peculiar but by no means unfamiliar character, simulating in mode of access, in type of period, in duration and decline of paroxysm most closely the malarial paroxysm, scarcely less frequently invade the nervous systems of pregnant women, and cause the most serious alarm by the unmistakable threatenings of expulsion by which they are accompanied. A prolonged observation of many of these paroxysms has led me to the opinion, that though attended with much suffering and giving rise to much alarm on the part of the patient, even without treatment they do not invariably result in catastrophe. Our object, nevertheless, is more to illustrate the therapeutic value of quinine in such cases, than to claim for it here the prophylactic power against abortion, to which, however, it is most unquestionably entitled in these cases. In many histories of miscarriages, as related to me by patients, many nightly paroxysms, attended by pains almost identical with labor-pains, recurring regularly in back and hypogastrium at half-hour or ten-minute intervals, and subsiding gradually in the morning, had preceded the one in which rupture of the membranes and expulsion of the fetus took place. These are “the false pains of pregnant women.” That they do not, even when neglected, always end in the production of “true pains” producing expulsion I will not deny, but that this is their tendency, and that they are most dangerous to pregnancy, I do most confidently assert. My largest number of recorded observations, in which I have prescribed quinine with distinct reference to the uterine disturbance with the

more important object distinctly in my mind of *preventing* miscarriages, belong to this class of apyrexie paroxysms.

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QUININE DURING LABOR.

As its administration during the actual progress of parturition has recently attracted some attention, I will make a few brief remarks upon quinine in labor, before giving my views as to its post-partum applications, which I regard as much more frequent and therefore more important. To begin with ; I have never made it a practice to resort to quinine as a promoter of contractions in retarded labor, whether in the first or second stage. It has not, in my opinion, any power *per se* to provoke or to enhance uterine contractions. There are, however, three distinct conditions, all analogous and kindred to each, in which I have found quinine during labor to be of the highest value : *First*, If patient is reported to have been the subject of quotidian or of tertian paroxysms, and if the type should coincide with the hours to be occupied by the labor, my first care always is to avoid the complication of a paroxysm of fever with the distresses of parturition ; and to this end I produce cinchonism, by the most speedy and efficient means at my command. If I fail in this, I know full well that I am to expect a most distressing, irregular, and possibly a dangerous labor. All the normal reflexes of the act of parturition will be disturbed and most probably exaggerated, by the superimposed reflex excitability of the cord which, according to my pathology,* constitutes the initial factor—the very essence of the febrile paroxysm ; *second*, in cases where even no history of paroxysmal fever has been given, but in which there is marked irritability, pain incessantly recurring but without contractions—I think it always advisable to bring about cinchonism in order to depress this abnormal reflex excitability of the spinal cord, and thus allow the merely functional reflexes to have sway.

Under such circumstances I have found uterine action to become more steady, so to speak, contraction being more efficient, and dilatation, if in the first stage, more progressive under quinine. For this purpose, however, I do not often select it as the best agent. I

*Transactions Am. Med. Association, vol. xi., May, 1858, Report on Nervous System in Febrile Diseases. Section Cerebro-Spinal Fevers, etc., etc.

find either chloral or morphine, or a few inhalations of chloroform far more prompt and equally efficient in quelling the evanescent reflex excitability upon which these perturbations unquestionably depend.

Thirdly, Of all the accidents of childbed, none are more startling, disconcerting, or alarming than *eclampsia*, yet by a careful and attentive consideration, on the part of the medical attendant, the cases in which convulsions are liable to occur may generally be recognized even in the earlier stages of labor. Whichever one of the many theories we may adopt in regard to the ultimate cause, whether plethora, anemia, uremia, or malaria be the irritant, we are irresistably forced to recognize unduly excited cerebro-spinal centres, with afferent and efferent nerves, as the instrumentalities through which the frightful drama is enacted. The one grand and paramount indication is to prevent or to combat reflex excitability. After the convulsions have begun, opium by puncture or otherwise with the bromides, chloral, chloroform, and blood-letting are, of course, our most ready and efficient means for restoring order to the muscular system. But among prophylactics, well-established cinchonism, in the beginning and maintained to the end of labor, is surpassingly the most valuable in all cases where convulsions are foreshadowed.

Referring to my notes in another department of practice, I find the most abundant confirmation of my faith in quinine to modify the convulsion of the puerperal state. As early as October, 1849, there will be found in vol. v. of *The Southern Medical and Surgical Journal*, p. 591, a paper entitled "Infantile Paroxysmal Convulsions and their Treatment with Sulphate of Quinine." Six cases are there carefully reported in which children from twelve months to five years were treated by large doses of quinine administered per anum, during the convulsion, with remarkable and invariable success; from five to ten grains being thus given at a time.

Among the apyrexie neuroses none equals in its severity, its inveteracy and fatality, traumatic tetanus, and of all neuroses, pyrexie and apyrexie, no one presents a more typical and well-defined exhibition of reflex motory domination. Since the use of chloral, chloroform, and the bromides, this disease has come to be considered not so uniformly fatal as once it was regarded; but long previous to their application, from the observation of cases treated by what

would even now be regarded as enormous doses of quinine at the hands of Dr. Robert Campbell,—over 1,300 grains having been taken during twenty-seven days.—I had been convinced, and have no reason to change my opinion, that it is by far the most unmanageable of all the morbid reflexes. Many cases of hysteria both gravid and non-gravid, emotional and convulsive, I have found to yield like magic to quinine.

From the above, it will be clearly apprehended that in the administration of quinine for the subversion of the dangerous conditions, whether of pregnancy or childbed, no special applicability is claimed for the agent on account of what may or may not be regarded as the specific cause operating to produce any of the varied manifestations. No more do I adjust the treatment in respect to the “morbific cause” in the case of exhausting uterine irritability or to that of the threatened eclampsia, or even to that of the approaching malarial paroxysms, than I did to the cases of traumatic tetanus, so entirely outside, probably, of all considerations, based upon any toxemia whatever. It is adjusted in all these instances *indifferently* to the dominant reflex motor excitability, whether, as in pregnancy, the calamity to be evaded be spasm restricted to the uterine muscle alone, threatening premature expulsion, or as during labor, the wide-spread exhibitions of the eclamptic seizure. The one essential condition, common as the result of many varied causes, has been arrived at. This is exaggerated reflex excitability of the brain and spinal cord. The quinine is given to depress that—no matter which particular one of the causes in any given case may have been operative in its production.

* * * * *

The following are some of the principles which may be derived from our discussion of quinine in its relations to obstetric practice:

First, That an exalted reflex excitability of the cerebro-spinal centres, as well as general plethora, may be recognized as a characteristic condition of the pregnant woman from the date of conception to the completion of involution. This may be termed “the gravid development and exaltation of the nerve-centres.”

Second. That this provisionally increased development and polarity, intended for the purposes of fetal and uterine growth, renders the woman, during its continuance, eminently liable to become the

subject of various morbid reflexes more or less peculiar to her condition.

Third. That these morbid reflexes are of two perfectly distinct and dissimilar kinds, differing widely as they may happen to occur, before or after parturition.

Fourth. During the entire period of pregnancy, and until after labor, the reflexes are of an *excito-motory* character, restricted to the muscular apparatuses of the uterus and of general volition. They are apyrexia and non-inflammatory. Their paroxysms threaten premature expulsion of the fetus in pregnancy, and eclamptic convulsions in labor.

Fifth. After parturition, the reflexes are of an *excito-secretory* character. They are propagated, through the ganglionic or vasomotor nerves, to the blood-vessels and capillaries of the pelvic organs and tissues and of the general system. They are marked by fever and peritonitis, with arrest of involution and mammary abscess, are their not uncommon results.

Sixth. That quinine, by its contractile action on the capillaries of the cerebro-spinal centres, exsanguinates their nervous structure and, more than any known agent, depresses the reflex excitability from which the varied morbid phenomena of both pregnancy and childbed originate.

Seventh. That quinine, except in cases of idiosyncrasy or from an injudicious administration of the agent, exercises no influence whatever to superinduce premature expulsion of the fetus.

Eighth. That moderate cinchonism adjusted to the type and approach of the paroxysmal neuroses, which endanger the welfare of the fetus during pregnancy, is one of our most efficient resources in many cases of threatened abortion and of premature labor. During parturition it may give "steadiness" to irregular uterine contractions; and, continued during labor, cinchonism is in a most valuable degree, prophylactic against threatened eclampsia.

Ninth. That the reflexes of child-bed, pertaining as they do, primarily and principally, to the recently evacuated uterus—well likened to an organ in a traumatic condition—opportune and ready for the awakening of fever and inflammation, are of the gravest character, frequently tending to disorganization and death, or else to permanent and irreparable injury. These "reflexes" constitute

a dreaded class of diseases, most commonly called "puerperal," which, by universal consent, must be *prevented* rather than trusted to efforts, so often unavailing, for their cure. To this end, the most valuable and reliable prophylactic method will be found to consist in the *daily administration of quinine to the degree of moderate cinchonism* from the day of parturition and to be continued daily until normal involution is safely secured. By the observance of this "routine" as a rule it is believed that the occurrence of puerperal diseases will be largely prevented, and that the rate of child-bed mortality will be greatly diminished.

Tenth. That cinchonism in its quality of preventing and controlling inflammation, whether traumatic or idiopathic, and of suppressing suppuration,—all of which is due to its power over reflex excitability of the cord and its action on the capillaries,—has a claim to antiseptic value superior to Listerism, and is less to be dispensed with than carbolic acid or any of the means and appliances of the recognized "antiseptic method." In general surgery and especially in uterine surgery, as well as after parturition, the combination of carbolized irrigations and applications to diminish *peripheral* excitability with persistent *cinchonism* to depress *centric* excitability should constitute hereafter an antiseptic method more reliable, generally practicable, and less to be dispensed with than the most faithful observance of the complex Listerian process.

The Administration of Iron—The tendency on the part both of prescribers and large drug manufacturers is to combine iron with other tonics, in the form of elixirs, syrups and wines of iron and quinine, iron and strychnia, iron, strychnia and pepsin, and so on *ad infinitum*. The combinations with pepsin are a shameful waste of this valuable remedy, and well calculated to bring it into disrepute. None of the others above mentioned should be used for or in any gastric derangement, except with due regard to time of administration. The most suitable time to give iron is one hour before meals, or fours afterwards.—A. W. Perry, M. D., in *Western Lancet*.

MEDICAL EDUCATION AND REGISTRATION IN
AMERICA.

The conditions under which men should be allowed to practice medicine—the amount and kind of knowledge which they should be obliged to show; the way in which their possession of that knowledge can best be tested; the length of the preliminary training which they ought to be required to undergo; the extent to which the details of that training should be regulated by compulsory rules or left to individual option—these are questions upon which there are wide differences of opinion in this country. Changes which some would regard as progress, others would consider retrograde. A glance at the customs with regard to these questions which prevail among the great communities of our own kin on the other side of the Atlantic, cannot but be instructive; for their regulations differ much from ours, and we can learn the probable effect of certain proposed changes here by observing the effect of similar ideas carried out into practice there.

Here in England we have nineteen licensing bodies, some of which are suspected, whether reasonably or not, of trying to undersell the others by granting their diplomas on easier terms. Such underselling as prevails, however, cannot go below a certain minimum, for if a licensing body were actually and frequently to put on the Register men grossly devoid of professional knowledge, it is possible that the Medical Council would really do something. But in America this underselling can and does go on unchecked. Any body of men can unite together and give any diploma they please, to whoever they like, and on what condition they think fit. And any person, with or without a diploma, can practice medicine. There is therefore what may be called free trade in medicine. The provision of competent medical advisers is left, so far as the central authority is concerned, to the unhampered operation of the law of supply and demand.

The statement just made, although true on the whole, yet requires now some qualification. A few years ago it was strictly in accordance with fact. But it has not worked altogether well. Some States have come to the conclusion that it is well that there should be some means by which the public should be able to distinguish

between properly trained and qualified medical men, and ignorant pretenders to skill in healing. The regulations by which they have mostly sought to do this are of two kinds—first, by verification of the diplomas by virtue of which any one wishes to practice; and second, by the examination of those who have no such diplomas. Those who have satisfied one of these two tests are then registered. Laws embodying provisions to this effect have been passed (with differences in detail) in the States of New York (in 1880), Illinois (1877), California, New Hampshire, Vermont, Pennsylvania (1875), Alabama and Texas (1879). These laws will certainly lead to improvement in the matter in question, although it will only be a partial and limited amelioration, as we shall show.

The first method by which one who wishes to practice in one of the States named, can get permission to do so, is by producing a diploma. The law of New York runs thus:—"If he has a diploma conferring upon him the degree of Doctor of Medicine, issued by an incorporated university, medical college or medical school of this State, with satisfactory evidence of his good moral character, and such other evidence, if any, of his qualifications as a physician or surgeon, as said faculty may require. If his diploma and qualifications are approved by them, then they shall endorse said diploma, which shall make it, for the purpose of his license to practice medicine and surgery within this State, the same as if issued by them." In Illinois and California the law is much the same. The New Hampshire Legislature has gone a little further. "*The Board shall issue licenses, without examination, to all persons who furnish evidence by diploma from some medical school authorized to confer degrees in medicine and surgery, when said Board is satisfied that the person presenting such diploma has obtained it after pursuing some prescribed course of study and upon due examination.*" The law of Vermont resembles this. In Pennsylvania it is still more explicit. "The possession of a diploma regularly issued by a medical school acting under a charter from this or other State or country shall constitute the sufficient license for the person to whom such diploma: *Provided, however,* that a diploma that has been, or that may hereafter be, granted for a money consideration, or other article of value alone, or that has been, or that may hereafter be granted to any one who has not pursued the usual course of studies

required by a legally chartered medical school, shall not be considered a sufficient qualification under this Act." These regulations are obviously fair and liberal towards the various teaching and degree-conferring bodies which exist. Their practical defect lies in the number and widely divergent character of the bodies whose diplomas are thus accepted as a sufficient stamp of professional education. Some are simply "bogus" diplomas. There is no central authority to restrain a body which does not openly sell its titles of honor from giving them on ridiculously easy terms, and prescribing only a short and insufficient curriculum. This is so real an evil that in some States no provision of the kind we have quoted exists in the law, but every one who wants to practice in the State must undergo examination. This is the case in North Carolina, in Texas, and, we believe, in Massachusetts. A law of this kind is a hardship to a man of mature years, who may be, very likely, superior to the examiners in scientific attainments and practical skill, but yet may not have at his fingers' ends the anatomical and chemical minutiae, a knowledge of which is rightly expected from students. We may, indeed, mention the case of Dr. Storer, a physician with high British qualifications, who, when he settled in practice in Boston, was asked to undergo an examination by men with regard to whose fitness for their position it would have been more appropriate to have asked Dr. Storer's opinion, than theirs about him. Dr. Storer refused to submit to such a test; and suffered no particular harm, in the long run, from having done so. This case points out two defects in the system. One, upon which we will not here further comment, is that it scarcely seems to us that there is care enough taken to secure the best possible examiners. In North Carolina they are elected by ballot. We do not think this is a matter of great permanent importance, because if it should from experience become clear that it is defective in this way, we doubt not that the defect will be remedied. The other is, that, at least in North Carolina, there is no penalty for non-compliance with the law except the disadvantage of not being able to recover fees; so that the quack has a legitimate excuse for exacting payment in advance.

The matters upon which we have hitherto commented only concern the Americans themselves and the few Englishmen who may want to practise in that country. But the effect of this system upon

medical education is a much more serious matter, and, from the place which Americans are taking in medical literature, concerns the whole civilized world. It is manifest that when one school gives a diploma cheaply, easily, and quickly, another school which exacts a longer, more thorough, and therefore more expensive, training, and the passing of a more difficult examination, is at a disadvantage. In an American journal we read the following with reference to the Bellevue Hospital Medical College, New York :—"The Faculty stated last year that for several years they had endeavored to induce students to attend three courses of lectures (passing their examinations in the elementary departments at the close of the second session), and that those who had followed this course had shown in their examinations a grade of qualifications much higher than the standard usually attained by students under the old system. The experience of the session of 1880-81 has led the Faculty reluctantly to the conclusion that to persist in the requirement of attendance during three courses will be to incur a risk as regards the interests of the College, which they do not feel justified in assuming." The lamentable fact shown in this passage should be well considered by those who think that it would be an advantage to set the student free from regulations, to get his knowledge how and when he best can. This has been the system in America, with the result that one of the best schools has to avowedly "advance to the rear," and assimilate its programme to that of the inferior ones. But we are glad to see that Boston and Philadelphia maintain the progressive attitude.

American medical literature is very voluminous, and characterized by great originality, inventive genius, industry, and practicality; and their schools by the multiplication of specialists and special chairs. The fault which we generally have to deplore in American books is the want of exact and comprehensive knowledge of other branches of medicine besides the writer's own. This is a result which might be expected. A man becomes a specialist before he has mastered the elements of medical science.

We notice also the hindrances which the laws of most States place in the way of anatomical research. This, no doubt, is an effect as well as a cause of the imperfections of American medical education. When lay Americans become convinced, by the style of men they

see in it, that medicine really is a science, and that its professors know what they are talking of, they will doubtless listen to their representations and provide what they are assured is needed. But under a state of things in which great numbers of those who call themselves doctors of medicine are quacks, devoid alike of knowledge and principle, we cannot wonder that the medical profession in America has not the weight in State Councils that ought to belong to its utterances.—*Medical Times and Gazette*.

THE NORTH CAROLINA MEDICAL JOURNAL offers as a premium for the best prepared and complete herbarium of the medicinal plants of the State, the following works, or their equivalent, in volumes the successful competitor may choose :

Curtis' "*Woody Plants*" and "*Catalogue of Indigenous Plants*" in one volume.

"*Fluckiger and Hanbury's Pharmacographia*," one volume ; and "*Flora Americæ Septentrionalis ; or a Systematic Arrangement and Description of the Plants of North America*." By Frederick Pursh, two volumes.

The collection must be prepared by the person presenting it. Each specimen must be neatly mounted on stout white paper 9x14 inches, (two or three specimens can be put on a sheet when they are small) and the name marked on each. This offer is made to members of the State Medical Society, and to licentiates of the Board of Examiners who may not be members.

Herbaria must be sent in on the 2d Tuesday in May, 1882, at the Concord meeting. For further particulars address Editor of the JOURNAL.

The Man with an Elastic Skin.—The *Med. Times and Gazette* quotes from the *Wien. Med. Woch.*, the case of a man on exhibition having a peculiarity highly interesting to medical men. This consists in an enormous elasticity of the skin. He is able to raise this infolds from his trunk or limbs to the extent of more than a foot; and as soon as the traction ceases the skin assumes its normal position. When the skin is touched it imparts a sensation as if one had hold of a fine sponge, and as if it were much too large for what it covers.

CORRESPONDENCE.

THE OBITUARY RECORD.

My Dear Doctor :—I need hardly remind you that you have been named by the American Medical Association a member of the Committee on Necrology for your State for 1881–82.

I shall depend on your zeal and efficient aid in the publication of the report.

Please to examine carefully, the list of members from your State. See that all those deceased are duly reported, with the year of their demise.

Please to prepare sketches of the lives of all who have not been already noticed in the past reports, or as many as you can, forward them to me at your earliest convenience and oblige,

Yours, &c.,

J. M. TONER, M. D.

WASHINGTON, D. C., November 4th, 1881.

I earnestly call the attention of our medical brethren of the State to the above communication to me from Dr. Toner, with the request, that they assist me in working up the necrology of North Carolina. I would be pleased to open correspondence with any who have had friends or acquaintances to die this year, or before this year. But few North Carolinians have had a biographical notice in the printed transactions of the American Medical Association. Our places should be filled.

Respectfully submitted,

J. W. JONES, M. D.

TARBOROUGH, N. C., November 26th, 1881.

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REVIEWS AND BOOK NOTICES.

THE SCIENCE AND ART OF MIDWIFERY. By WILLIAM THOMPSON LUSK, A. M., M. D. With Numerous Illustrations. New York : D. Appleton & Co., 1, 3 and 5 Bond Street. New York. 1880. Pp. 687.

Very few systematic treatises on midwifery from the pens of American authors have appeared in the United States. The works of Dewees, Meigs, Hodge, and the syllabus of Dr. David H. Tucker, of Richmond, complete the list, we believe. The only one of these volumes which has any permanent value is the great work of Dr. Hodge.

Since his day, though, there have been many changes in the way of putting the science and art of midwifery, and some fashion. Heretofore, the English and French were our great obstetric masters. In every doctor's office where there was an outfit of working volumes, Ramsbotham and Cazeaux were pretty sure to be found, but now, with the exception of the great popularity of Leishman, nothing less than a German volume will do. While this is somewhat of a fashion, it is also a fashion founded in good sense. The Germans have advanced to the front rank as obstetric teachers, and their influence at this time is far greater than ever before.

This is evident in the volume before us. The old stock engravings from Cazeaux and others no longer stare one in the face as he turns the pages, but the fresher and less familiar illustrations from Schultze, Braun-Hennig, Küfsmann, Leyman, Billroth, Schröder, Erdl, Waldeyer, and others, nearly all Germans.

A student practitioner does not look for new things in an obstetric work these days. The science and art of midwifery is not the field in which startling revelations are expected. The same old process of labor, as old as the human race, has to be described in all its bearings, and the author who gains the most readers will be the one who succeeds in describing the process in the most attractive and intelligible manner.

Prof. Lusk has spared no pains in the production of this volume. It is at once attractive and readable. His work is divided into 37 chapters under the following general heads : Physiological Anatomy ; Physiology of the Ovum ; Physiology of Pregnancy ;

Pregnancy ; Labor ; The Puerperal State ; The Pathology of Pregnancy ; Obstetric Surgery ; The Pathology of Labor ; Diseases of Childbed.

His original observations are marked by candor and conservatism. This is well and favorably shown in his chapter on the use of forceps, and other instrumental procedures to complete labor. We quote one paragraph to show the author's conservative views on the use of forceps.

"It is in vain to lay down well defined rules as to the precise time at which forceps should be applied. Formerly it was advised to wait the advent of a thin, reddish-brown discharge. As the latter simply consists of serum commingled with blood from overstrained capillaries, it furnishes a sign that delivery had been delayed too long. Some counsel applying forceps two hours after the completion of the first stage of labor, and proclaim longer waiting a useless barbarity. Clearly, however, it is not so much the length of the second stage of labor which furnishes the indication for forceps, as the degree of the reciprocal pressure exercised between the head and the pelvis. A valuable index to this pressure is furnished by the caput succedaneum. In the second stage, a scalp tumor of large circumference can only be produced by the circle of the bony pelvis. Such a tumor, increasing in size, without evidence of pressure, and furnishes, therefore, the most reliable indication for forceps.

"Whether the ease with which the forceps can be applied at the outlet and the safety which attends its employment justify its use as a means of saving the physician's time, or the patient from an additional half hour of suffering, are questions which are at least debatable. I can only say that, with increasing experience, my own practice has grown more and more conservative, and my own belief is that true wisdom requires us to abstain from even trivial operations so long as Nature is able to do her work without assistance." Page 348.

As to the use of anæsthetics, in labor we note with pleasure the conservatism, and the wisdom of our author. (Pages 219 and 220.)

"In my own experience during the last sixteen years there have been comparative few cases in which I have not used chloroform or ether in some stage of labor. The result of my experience has been to make me a warm advocate of their wider employment on the one

hand, while proclaiming the necessity of caution in their use upon the other. It seems to me that the hesitancy manifested regarding their general adoption is due, in large measure, to the fact that few practitioners give themselves the trouble to master the necessary *modus operandi*, to study the limitations of their usefulness, or to learn the conditions of their safe administration. * * * * ”

“ Except in prolonged insensibility required for difficult obstetrical operation, I think the preference should be accorded to chloroform, rather than ether.

“ As a rule chloroform should not be administered during the first stage of labor, partly because of its tendency, when given at too early a period, to weaken the contractions of the uterus, and partly because protracted anæsthesia has a tendency to impair the cardiac force. * * * * ”

“ If the pains in the second stage are of feeble intensity, it is best to withhold the anæsthetic ; if of normal strength, chloroform may be given, but at first only in small doses and during the continuance of a pain. The anæsthetic should not be pushed to the stage of complete unconsciousness until the head begins to emerge at the vulva.”

“ At the beginning of each pain the patient should be directed to take a number of deep inspirations. During the acme of the pain the expiratory efforts which are then called into play prevent the inhalation of any considerable amount of the anæsthetic.

“ When chloroform is first given, it is common for the pains to become weakened, but this suspensive influence upon the uterus is usually temporary. Exceptionally, however, the weakness of the pain may continue, and render it necessary to withhold the anæsthetic. In still rarer cases the pains remain inefficient after the anæsthesia has subsided. On this account it seems to me certain that those who use chloroform habitually will find themselves compelled to resort to the forceps with somewhat increased frequency. The immunity enjoyed by woman in childbirth against the accidents which sometimes occur from anæsthesia in surgical practice is not absolute by being dependent upon its cautious and intelligent administration.”

We can endorse most of the chapter of anæsthetics with the exception of the concluding paragraph :

“ In lengthy operations requiring prolonged anesthesia ether should be preferred to chloroform.”

It is needless to open up the discussion as to the relative value of chloroform and ether that this statement would provoke. We can only say that the best practitioners with us use chloroform exclusively because of its rapid action, its potent anesthesia, its non-inflammability, and many other qualities that a skilled anæsthetist values.

We notice with some surprise one statement that arrested our attention, on the subject of deformed pelvis. After quoting Litzmann, Michaelis, Spiegelberg, and Schröder to the effect that the average frequency of deformed pelvis in Germany is 14 per cent. He says that in his own field of experience in the Emergency and Maternity Hospitals of New York city, the inmates of which are however, almost entirely of foreign birth, every degree of pelvic deformity finds abundant illustration. In our native American women abnormal pelvis are rare. But this rarity, he thinks, judging by a study of the cases of Dr. T. A. Emmett lead to the conclusion that the existence of contracted pelvis is frequently overlooked. Certainly the immunity of American women is by no means so absolute as to justify the neglect into which the study of pelvic deformities, has so generally fallen. (Page 433.)

The insufficient examination which we have given Prof. Lusk's work impresses us very favorably. So far as we have consulted it we find his teaching sound, plain and practical, and we believe it to be a book that will at no distant day find its way into every good library.

A MEDICAL FORMULARY, BASED ON THE UNITED STATES AND BRITISH PHARMACOPŒIAS, Together with Numerous French, German and Unofficial Preparations. By LAURENCE JOHNSON, A. M., M. D. New York: William Wood & Co, 27 Great Street. 1881. Pp. 402.

A mere compiler, one who has had less extensive therapeutical knowledge than Dr. Johnson could not have produced such a volume. His fitness for such a task is well known. The author is a member of the Committee of Revision and Publication of the U. S. Pharmacopœia, and he has devoted much hard study to the subjects cognate to the one in hand. The amount of dreary reading and hunting to bring together the materials here presented would be undertaken by very few persons.

The more important articles of the United States and British Pharmacopœias are given, and under each head the various preparations with which this article enters. A short description of the substance is given, its source, its medicinal uses, its pharmaceutical application, and the dose. Formulæ for the various preparations

after the British, French and German Pharmacopœias and the various English, French and American hospitals and private sources, are given.

To the physician busily engaged in practice such a volume of reference is valuable. Here one can find not only any given remedy and the doses, but formulæ which have been thoroughly tested, right to his hand, without the loss of time in working out one for himself. It has already found a welcome place among our working volumes.

We call attention of the author to our inaccuracy. Under the head "Resina," he gives this definition: "The residue after the distillation of the volatile oil from the turpentine of *Pinus palustris*, Mill, and other species of *Pinus*." In this country, though, almost all the rosin comes from turpentine from *Pinus australis*, Michx.

This volume is the May installment of Wood's Library of Standard Medical Authors, and has undoubted and permanent value.

A GUIDE TO SHIPMASTERS VISITING THE CAPE FEAR AND OTHER RIVERS. Printed for Gratuitous Distribution by the North Carolina Board of Health. Pp. 10.

This pamphlet was issued for the guidance of shipmasters and others interested in the prevention of river fever. The Board of Health thought it a hardship that as our quarantine of necessity, and properly, excluded vessels from the tropics entering our ports, it was as little as they could do to point out the dangers of malarial fever in our rivers.

It has been known a long time that pernicious malarial and other forms of fever were especially rife among crews sleeping on board their vessels in the months of July, August, September and October, and further that it was almost entirely preventable. This pamphlet is written to show how it could be prevented.

The clinical thermometer is explained, and its use to detect fever clearly pointed out. By this guide prophylactic and remedial doses of quinine or some form of bark are given.

We make a quotation of the following paragraphs to show the scope of the instructions.

"*What a Rise in Temperature Means.*—For the purposes of the instruction intended to be conveyed, it is safe to assume that every degree of heat beyond the arrow is a degree of fever.

“ The following table will show the relation between the pulse and the temperature of the body.

“ *An increase of temperature of one degree above 98° Fahrenheit, corresponds with an increase of ten beats of the pulse per minute.* (Aitken.)

“ Temperature	98°—	Pulse	60.
“	99°—	“	70.
“	100°—	“	80.
“	101°—	“	90.
“	102°—	“	100.
“	103°—	“	110.
“	104°—	“	120.
“	105°—	“	130.
“	106°—	“	140.

“ The rule above is subject to some variation, but is a fairly good guide.

“ It is well known that 101° before 11 A. M., indicates an approaching fever, and that the same after 5 o'clock, a declining fever; and so on with every degree above it. 103.5° is about the average of the malarial fever of the rivers. Many severe cases reach 104.5° and 105.5°. Even 106° is not surely fatal, but beyond this, in the most favorable conditions, the danger is very great. 108° to 110° is most surely fatal.

With these introductory remarks we will call the attention of *shipmasters* to certain precautions which long experience in this latitude has shown necessary to be observed.

“ The fever occurring amongst the seamen who visit this and other Southern rivers is malarial. It is due to the exposure of sleeping on board vessels, and keeping late hours at night.

“ *The Nature and Course of River Malarial Fever.*—It commences sometimes with a chill. The chill is either a shaking ague, or sometimes merely coldness of the fingers, blue nails, cold nose, and ears and toes. Both forms may be an essential part of similar fever. A chill may last from half an hour to two or three hours, and is always followed by fever. Chill is only a cold stage of fever, and the thermometer will most always show from 101° to 102° even when the chill is highest. The fever comes on, the coldness of the skin gradually going off, and the heat of fever following, the temperature rising gradually to 103.5 to 105°.

“ For instance, if the chill comes on before 11 o'clock, A. M., as it often does, the fever will reach its height usually by 5 o'clock P. M., and then gradually decline, either by copious sweating or an abundant discharge of urine. If the fever goes entirely off it is *intermittent*. If it merely declines it is *remittent*. In either case a person seized with fever may look for a return on the succeeding day, or the day after. These are forms of the same fever and have all been named. Thus we have them coming on *daily, twice daily, every other day, every third day*, and so on; but the fevers are essentially the same, being practically cured by the same treatment.

“ *The Way to Avoid River Fever.*—Live temperately, and do not sleep in the river on board vessel during the months of August, September and October. Tho air of the town is perfectly harmless to most persons, and especially those who go to bed early, and are not intemperate.

“ Sleeping on board during the months named does not always cause sickness, but it does nearly always. Sometimes fever does not develop until a vessel gets to sea, and then all hands may be taken down at the same time. Such cases are known.

“ *Prophylactic.*—The daily use of quinine or the preparations of peruvian bark, *will prevent fever*. It is a good practice to give to crews of vessels a daily morning dose equal to five grains of quinine. Some of the cheaper preparations of bark answer this purpose very well. None of them are equal to quinquina, a preparation tested now during several seasons, and found to be remarkably efficient. It contains 15 per cent. of quinia and 15 per cent. of other valuable alkaloids of peruvian bark, which really gives it an advantage over the sulphate of quinine usually sold. It is recommended with great confidence.

“ *What to do After the Vessel Gets to Sea.*—In every case of complaining on the part of a seaman, the captain or an intelligent officer should take the man's temperature. If it is more than 98.4° he will be wise to conclude that there is a fever approaching. 100° or 101° is absolute evidence, apart from any other condition of the man, that he has fever, and it is tolerably certain that if it is not checked he will have more the next day.

“ *What to do if the Temperature Rises.*—No amount of fever should prevent the patient from taking *quinine*, or some other

preparation of bark in the proper doses. It is always best to commence quinine early in the morning because the fever increases towards noon, and with the increase of fever comes on many times such a sick stomach that the patient cannot retain the much needed medicine. But if the stomach does not reject it he ought to have his medicine in proper quantities, notwithstanding the fever, for every day of its continuance unaffected by medicine, lessens the chance of recovery.

“*What Medicine to Give.*—If the fever is detected early; medicine should be given at once. It is necessary usually to give *twenty grains of quinine* every twenty-four hours. *More* is needed sometimes, but it is not often that a less quantity will succeed. It is best to direct five grains of *quinine* in pills every two hours, commencing as early as four o'clock in the morning, until twenty grains are given. Should pain in the head and hot skin, and unpleasant “singing” or “roaring” in the ears, trouble the patient, *bromide of potash* should be given in *ten grain doses*, dissolved in water, every two or three hours. Usually a very hot and dry skin yields to the action of the remedies above. Should they fail, *fluid extract of jaborandi* should be given, fifteen drops every hour until copious sweating comes on.

“*Constipation* is sometimes an accompaniment of this fever, and should be relieved by *calomel and soda at night* or *epsom salts and table salt in the morning*.

“*Relapses* are not uncommon, and although the thermometer may not indicate fever after a few days of treatment, (and it is urged that the thermometer should be carefully applied morning and evening,) it is never safe to withdraw the quinine the day following the one on which the patient misses his fever. At least *ten gains* should be continued daily for three or four days in succession.”

A TREATISE ON FOOD AND DIETETICS PHYSIOLOGICALLY AND THERAPEUTICALLY CONSIDERED. By T. W. PAVY, M. D., F. R. S. Second Edition. New York: William Wood & Co., 27 Great Jones St. 1881. Pp. 400.

Pavy on Food is a well known book, and the publishers have done well to present it in this cheap form to the reading medical public. If there is one thing that stands in the way of our success

more than any other in the treatment diseases, it is the lack of control we have over the dietics of our patients. The successful doctor must understand the properties of food and its preparation, and must be full to overflowing of resources that will enable him at the bedside of the poor to select food which can be procured and give directions for its preparation, and also to show his familiarity with all the elegancies of sick diet in the chamber of the sick. Those physicians who shun it, are closing a way to patronage many times, when surgical and medical skill would attract no friends.

This volume has a decided English tone, and could have been Americanized with advantage. It has, nevertheless, been the foundation of a large number of lectures and addresses which have been served to American readers, and has been really the source of knowledge whence several popular tracts have derived their inspiration.

TRANSACTIONS OF THE TWENTY-EIGHTH ANNUAL MEETING OF
THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.
Held at Asheville, N. C., May 31st 1881. Wilmington, N. C. :
Jackson & Bell. 1881, Pp. 128.

This volume is a collection of the report of the Twenty-Eighth Session of this Society which has been running through the JOURNAL for several months. Most of the members of the Society have already read the volume in the shape we have printed it. Collected in this way it is more convenient for permanent preservation and for separate binding.

It will be seen that forty new members was added to the list, thirty-seven of whom were new licentiates. The literary work represented in these pages is quite subordinate to the actual labor performed by the Board of Medical Examiners and the Board of Health. This work cannot be so much a matter of record in this volume as is desirable, on account of the engagements of so many gentlemen in the personal examination of candidates. With but one exception, the papers read were from young members.

Every year we have been looking for evidences of literary activity equal to the business activity which is so eminent a quality of our membership, but it does not come, and we must hope on. It is not worth our while to waste our time in regrets upon this subject, but

we should be thankful that we have escaped the evil which has befallen our sister Society in Virginia.

ECZEMA AND ITS MANAGEMENT: A Practical Treatise Based on the Study of Two Thousand Five Hundred Cases of the Disease.
By L. DUNCAN BULKLEY, A. M., M. D. New York: G. P. Putnam & Sons, 27 and 29 West 23d Street. Pp. 344.

American dermatologists have been very active in their specialty in the past few years, especially as to literary contributions. Besides the numerous monographs published from time to time by the Dermatological Association, some of them very valuable, Dr. Geo. H. Fox's "Photographic Illustrations of Diseases of the Skin," Dr. Duhring's "Atlas of Diseases of the Skin," and Dr. Duhring's Substantial "Treatise on Diseases of the Skin," Dr. Piffard's "Materia Medica and Therapeutics of the Skin," and now we have a handsome volume of nearly 350 pages on "Eczema."

"Eczema" as defined by Dr. Bulkley, is "a non-contagious, inflammatory disease of the skin, of constitutional origin, acute or chronic in character, manifesting any or all the results of inflammation at once or in succession, and accompanied by burning or itching."

"The earliest local phenomena being nerve and capillary disturbance, the process may remain in the erythematous stage, and the skin lesion be aborted, as far as relates to its active increase, and the threatened eruption subside without further advance. Or the capillary dilatation may continue, a certain amount of fluid may transude and become organized, and the chronic erythematous eczema result. Or, there may occur so much exudation that vesicles are formed, and when these rupture a peculiar glaring fluid exudes which stiffens linen, and tends to dry in scales and crusts. If the inflammation is less active only papules are formed. In the more chronic cases the exuded fluid does not reach the surface, but is retained in the meshes of the skin, and becoming organized, constitutes what is known as the infiltration or thickening of eczema, which may then crack and give great distress." Page 4.

That such a volume is required to elucidate one single disease must strike the general practitioner with peculiar force. To those of us familiar only with the short paragraphs on the diagnosis and

treatment in our text-books on Surgery and Practice, it will appear as an unnecessary elaboration. But teachers of dermatology find as much to undo as to accomplish in new work. They find it necessary to correct the general belief in the purely local origin of skin diseases, and to lead the student to look deeper into the causative elements which so many times are coupled with profoundly constitutional phenomena. In searching through this volume we cannot complain of its length. It is written clearly and in pleasing style. It impresses us anew with the great importance of eczema and of the difficulties in the way of its treatment. It adds additional weight to the words of Sir Erasmus Wilson quoted as a prefatory text.

“To be a successful practitioner in the treatment of eczema, a medical man must be an accomplished physician; to manage the local treatment with success he must also be an able surgeon. * * * In a word, the highest and best quality of medical art and science must be put in practice with foresight and discretion for the treatment of eczema.”

The volume closes with a chapter on the “Therapeutics of Eczema,” but would be more properly called a chapter of formularies. These prescriptions will doubtless prove very serviceable to readers who consult the volume, but it hardly comports with the idea, that one’s knowledge of treatment should be so firmly based upon general principles that the mere production of formulas would be a matter of easy accomplishment.

The most expensive part of a general practitioner’s library is the foreign volumes which for the most part compose the working outfit to the diagnosis of diseases of the skin. As long as we can get such volumes by an American, we need no longer be dependent upon foreign writers. We hope though that the increase of dermatological literature will not frighten general practitioners from undertaking the cases in their practice.

COULSON ON DISEASES OF THE BLADDER AND PROSTATE GLAND.
Sixth Edition. Revised by WALTER J. COULSON, F. R. C. S.
New York: Wm. Wood & Co., 27 Great Jones St.

This is the July volume of Wood’s Library of Standard Medical Authors. It has been long and favorably known as a trustworthy

treatise. This edition has been revised by the author, and virtually re-written, for it has been twenty-three years since the last edition appeared. In that time rapid strides have been made in the treatment of stone, alone. But in all the topics included in the title of the book, large experience has accumulated. Mr. Coulson pays a deserved compliment to the operation of lithotrity as devised by Dr. Bigelow, of Boston. He thinks it bid fair to "create a complete revolution in the doctrine hitherto current with regard to lithotrity, and in the mode of performing that operation."

The chapter on the Chemistry of the Urine has been omitted, for the reason that the subject was considered now too extensive to admit of suitable treatment in a work like this, and in its stead four chapters on the Anatomy and Physiology of the Bladder and Prostate have been substituted.

PROCEEDINGS OF THE NORTH CAROLINA PHARMACEUTICAL ASSOCIATION. At its Second Annual Meeting. Held at Newbern, August 9th and 10th, 1881. Also Constitution and By-Laws, Pharmacy Act, &c. Monroe, N. C.: Enquirer Steam Power Presses. 1881. Pp. 64.

We do not see how it could have been possible for the North Carolina Pharmaceutical Association to have taken such an advanced stand but for the pioneer work done by the State Medical Society. Nearly three years ago a resolution founded upon suggestions made by the Edgecombe Medical Association to the State Medical Society, looking to the examination of druggists and placing certain restrictions upon the dispensing of medicines, passed the latter body. This movement met with no little opposition on the part of several druggists, and the agitation caused by the discussion of the questions in the daily papers, resulted in the organization of the Pharmaceutical Association.

True to the business sagacity which has always marked the action of the "fat apothecary," a brilliant success was the first result of their labor, so that in two years they have secured a State law requiring the registration of all apothecaries and the organization of a Board of Examiners to examine all applying for license. This work of organization has been accomplished with credit to the originators of the Association, as is evidenced by a perusal of the Constitution and By-Laws.

At this meeting the number of members amounts to 163, and the number of registered druggists in the State is 278.

A paper from S. J. Hinsdale, of Fayetteville, describing some experiments in qualitative and quantitative analysis was read. Mr. Hinsdale is an excellent chemist, having, without doubt, the best private chemical outfit in the State, and enjoys his studies in qualitative and quantitative analysis with a keen relish. We quote from his paper the following :

" Teschemacher's Method for the Determination of Morphine and Opium.—The process is a little longer than some others, but the beauty of the method is well worth the experiment. All the morphine is obtained in strictly pure, fine white crystals without the aid of charcoal. The opium is macerated in cold water, with a certain quantity of acetate of lead (which is added to separate meconic acid, and which converts the morphine into an acetate), the filtrate is evaporated to an extract, which is digested in alcohol, this separates the gum, &c., of the opium ; at this stage a little diluted sulphuric acid is added to get rid of the excess of lead salts (any excess of sulphuric acid is by the subsequent treatment converted into sulphate of ammonia). The mixture is allowed to settle for twelve hours and then filtered. The filtrate is evaporated to a certain small quantity, ammonia is added, stirring rapidly and continuously for a while, and cooling as rapidly as possible ; the morphine is precipitated in a fine powder, and is now washed with alcohol and ammonia, which has been saturated with morphia, then with morphiated water, then with ether, and then with benzine to get rid of the narcotic, then dried at 100° F., and weighed ; the morphine is obtained in very fine white crystals.

* * * * *

" I have experimented a good deal with the color test for strychnia. I find ceroso ceric oxide to be very delicate, the continuance of the wine red color for a long time, is a variation from the rapid play of colors produced by the other oxydizing reagents. Mr. W. T. Wenzell describes the method of preparing a solution of permanganate of potash, which he says is *par excellence* the test, and it is really wonderfully delicate.

" He dissolves one grain of permanganate of potash in 2,000 drachms of sulphuric acid. A small drop of this solution touched to the slab on which a drop of the solution of strychnia has been evaporated, develops the usual play of colors ; he says it will detect 1-900,000 part of a grain.

* * * * *

" There is a suggestion by Dr. McCaw, of Canada. (This is Prof. J. B. McCaw, of Richmond, Va., evidently) It is for a quick preparation of hydrated sesqui oxide of iron for arsenical poisoning. He says : ' Take one drachm of tincture of chloride of iron, one

drachm of bi-carbonate of soda, a teacupful of tepid water, these are mixed. The sesqui oxide of iron is immediately formed in a solution of chloride of sodium, and may be given almost *ad libitum*.

"I think the above objectionable on account of the large excess of soda.

"One ounce of tincture of chloride of iron, one drachm of caustic soda, and one-half pint of water, is better. The one drachm of caustic soda is a very little more than sufficient to precipitate all of the iron, as peroxide, leaving the mixture *very slightly* alkaline."

The Metric System is a paper by Mr. E. V. Zoeller. He says the final adoption of this System by the pharmacists is inevitable, and advises them to make haste to learn it thoroughly so as to be able to apply it in compounding the formulas of the new Pharmacopœia. (Only a modified form of decimal weights and measures has been adopted by the Committee on the Revision of the Ph. U. S., and Mr. Zoeller is mistaken in implying the contrary.)

Syrupus Ferri Iodidi is the subject of a paper by Mr. J. A. Sheets, of Wilmington, calls attention to the changes in this syrup. He thinks that the syrup should be made cold, that the iodine should be as free from moisture as possible, that the iron wire should be pure and thoroughly cleansed, and that the sugar should be pure.

Mr. E. V. Zoeller contributes another paper on *Syrups and Emulsions*.

Mr. Hinsdale, of Fayetteville, was made President for the ensuing year. A better choice could hardly have been made.

WALSH'S PHYSICIAN'S HANDY LEDGER. A Companion to Walsh's Physician's Combined Call Book and Tablet. Ralph Walsh, M. D., 332 U. Street, Washington, D. C. Pp. 600.

After two year's of experience with the ledger, we are satisfied that it furnishes a perfect plan for the easy and correct keeping of accounts. The laziest doctor, the poorest business man in the craft, can save ten times as much as the book costs in one year, by the facility and completeness of the system here introduced. Dr. Walsh will forward a blank explanatory sheet on application.

His Call-Book and Tablet has also many things to recommend it, and is a companion to the ledger.

THE SANITARY ENGINEER which has heretofore been a monthly, and latterly a bi-monthly, will appear as a weekly paper. The *Sanitary Engineer* has kept in the lead in all sanitary matters, and is indispensable to all persons interested in the condition of the public either as managers of Societies, or, as private citizens. Address, 140 William St., New York. Price \$3.00 a year.

NEW TREATMENT OF ABSCESS.

“When the abscess points it is opened and the contents evacuated. The cavity is then injected with carbolized water, and over-distended for two or three minutes. The water is then pressed out, and over the whole area undermined by the cavity, small, dry, compressed sponges are laid and bound down with a bandage. Carbolized water is then applied to the bandage and injected between its layers until the sponges are thoroughly wet, after which a dry bandage is applied over all. The sponges by their expansion make firm and even compression upon the walls of the abscess, and hold them in perfect apposition, thus favoring a union. The dressing is left on for five or six days, unless there is a constitutional disturbance, or pain in the seat of the former abscess. It is found, in most cases, when the bandage is removed, that the abscess has completely closed by an approximation of its walls, and the external wound heals readily under a simple dressing of carbolized oil. A case was recently seen where this admirable result was secured in a child, although the abscess was a large one, originating in caries of the head of the femur, and opening on the outside of the thigh. No constitutional disturbance, no discharge, no re-accumulation, and no pain followed its use. Mammary and submammary abscesses have been treated by this method with excellent results.”—*Dr. Stephen Smith in Chicago Med. Review—Canada Medical and Surgical Journal.*

Cause and Effect!—A lady visiting a friend just confined remarked to the grandmother, “But how small the child is!” The old lady replied, “Well, we had a homœopathic doctor.”—*Cincinnati Enquirer.*

NINTH ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION AT SAVANNAH.

The ninth annual meeting of the American Public Health Association began at Savannah on Tuesday, November 29th. Among those present were Drs. H. P. Walcott, S. H. Durgin, Azel Ames, Jr., and B. Joy Jeffries from Massachusetts; and Dr. Stephen Smith and Professor J. L. Cabell, of the National Board of Health. After the formal exercises of the opening and the election of new members, a communication by Dr. Ames, recommending the establishment of a National Museum of Hygiene at Washington, was followed by the offer of the free use of the one already founded by the Surgeon-General of the Navy. Among other communications were those advising the abolition of governmental regulation of prostitution, and that the Society should obtain charters in the various States where it has members.

The first regular paper of the day was by Dr. Ezra M. Hunt, of New Jersey, on "The Contagious Diseases of Domestic Animals."

Beginning with a generalization of the importance of the Study of comparative physiology and pathology, and the direct benefit accruing to man from a more accurate knowledge of the morbid processes in animals, the writer passed to the consideration of the separate diseases found among them. Contagious pleuro-pneumonia has as yet produced no specific disease in man, its importance depending upon the production of an inferior quality of meat. It was otherwise, however, with splenic fever and other forms of anthracoid diseases, which are directly and virulently contagious. Hog cholera derives its interest, not only from the immense pecuniary loss it entails, but from the fact that the pork when eaten is capable of causing sickness. In the remarks on trichinosis it was shown that, relative to the vast number of swine produced in this country, the per cent. of those infected falls far below what is found abroad, and that, though there is a reaction against the stringent legislation regarding American pork, still, until a regular governmental system of examinations is instituted, our exports must necessarily be limited. The paper closed with practical suggestions regarding the inspection of all meats.

Dr. Joseph R. Smith, U. S. A., offered the next paper on "Disease Among Texas Cattle."

From his observations he concluded that Texas cattle in their prairie pastures are singularly free from disease ; that the weight of the spleen is an element of value in determining diseased conditions only in comparison with the weight of the whole animal and its age. As the result of experiments upon the temperature of cattle it appeared that the normal range was four to five degrees higher than in man.

TRICHINA SPINALIS.

A report of the New Orleans Auxiliary Sanitary Association upon the Examination of Hogs at the New Orleans Abattoirs during the summer of 1881 followed. Of the fifty-four hundred hogs examined, twenty-two were found infected with trichinæ. As a result of study upon these it appeared that corn fed hogs alone were affected and that Southern swine were free from the disease.

The fourth paper by Dr. John Patrick, of Indiana, on *Trichina Spiralis*, commenced with remarks on parasites in general as found in man and in animals, noticing their method of development after ingestion ; and the varying larvæ produced by the same ova in different animals. The trichina spiralis as found in man was then considered, a brief pathological sketch being prefaced to a clear clinical history of the disease. The case of a nursing child, infected through its mother's milk, was instanced as showing the wide distribution of the parasite when once in the body.

A paper by Dr. S. F. Billings, of Boston, on *Trichina Spiralis* in American and German Hogs killed at San Antonio, Texas, read by title only, closed the morning session.

The first paper of the afternoon was by Dr. S. S. Herrick, of New Orleans, on "The Comparative Vital Movement of the White and Colored Races in the United States.

He showed that the rate of mortality was much greater among the colored, especially during the first five years of life ; that there was a greater liability to consumption and acute lung disease, while especially immunity was enjoyed from cancerous diseases, delirium tremens, and suicides. Much of the increased mortality was due to inferior medical and hygienic attention. He also proved that there is a steady increase in the colored population, and that the African race is not dying out. An interesting fact was the vital disturbance

in the colored gain during the decade 1860-70, being 9.9 per cent. against 22.1 per cent. in 1850-60, and 34.8 in 1870-80. From the almost absolute immunity from competition in their occupations, and the absence of overcrowding, he considered there was destined to be a constant numerical increase, but the same factors will prevent any corresponding intellectual improvement, because of the lack of incentives to other and higher industries. An interesting discussion on the probable future of the colored race in America followed.

Prof. John L. Cambell, of Indiana, next read a paper upon *The Kankakee, a Sanitary Problem of Indiana*, showing how a large tract of waste and malarial land could be made productive and healthful by securing drainage by the Kankakee, and suggesting various methods for accomplishing this result. The two remaining papers, *The Disposal of our Dead*, by Dr. W. H. Curtin, of Illinois, and *The Relation of Alimentation to Infantile Development and Disease*, by Dr. T. C. Duncan, were read by their titles only.

At the evening session a formal welcome was extended the Association by Captain Mercer, representing the city, who alluded to the increasing value of the results of these meetings. He was followed by Dr. R. J. Nunn, of the Georgia State Medical Society, who dwelt especially upon the opposition with which advanced sanitary measures were received by the people, and the importance of the work the Association had undertaken.

ANNUAL ADDRESS.

The annual address by Dr. C. B. White, the President of the Association, followed. Giving the names of the deceased members, he spoke warmly of the services they had rendered, and suggested the appointment of a committee to prepare a suitable memorial. Among the replies, he continued, to a circular asking for subjects for investigations, was the suggestion whether there was such a thing as sanitary science, and this question formed the general theme of the address. The speaker said that at all times there had been individual observers and collectors of vital statistics but never any uniformity either of observation or arrangement, and attributed this to lack of proper training in scientific investigation even among scholars, a defect, which as scientific methods are made more familiar, and scientific men are better known, will be lessened generation

after generation, although at present we are almost at the beginning of knowledge in this particular. He deprecated the hasty generalizations and unfair, incomplete theories constantly thrust forward and as constantly overthrown, thus causing distrust to those not conversant enough with science to discriminate judiciously. He alluded to those who, living in opposition to all known hygienic rules, continue strong and well, as possessing some hitherto undefined peculiarities beyond their fellows, enabling them to defy all laws of health. The individual he regarded as the offspring of race hygiene, and race hygiene as the object of sanitary science. He thought the point had now been reached when expert work was necessary for progress, and that the efforts of amateurs of unbounded zeal and equal ignorance required trained guides, which the States must furnish. That over these there should be a still higher power, of necessity national, which should systematize and bring into a complete whole the work of individuals, and with other countries form an international commission. Regarding the proper education of the people as most essential for the acceptance of whatever good sanitarians may discover, he suggested suitable study and preparation, beginning with early childhood, and not limited to scientific schools alone. The address closed with the prophecy that as population was increased by race hygiene, so sanitary engineering would develop nature's resources, and the struggles for existence would be lessened rather than increased.

A committee was appointed to prepare a suitable memorial of the deceased members, and, after accepting an invitation to the members to attend a reception at the residence of Dr. Falligant, the meeting adjourned.

The morning session opened with the election of new members and the appointment of various committees.

Dr. J. J. Speed, of Kentucky, read the first paper, on Inside Sources of Diseases.

Proper attention to the stomach and appetites was urged as more necessary than external hygiene.

The reports of Dr. Wright, of New York, and Dr. Runnels, of Indiana, bring out the great danger to the public health following the use of impure water. We felt particularly interested in the report of Dr. Burgess who is stationed at Havana to inspect vessels

leaving thence for ports in the United States, and as far as he can prevent the infection of these vessels, or if present, provide for its removal, to furnish to the masters of vessels a certificate of the condition of the vessel and crew. He says that vessels lying at the wharves, themselves become bearers of the yellow fever poison, which is resident always in the garbage and filth refuse about these wharves. The ballast he divides into four classes all of which he says is generally infected with the yellow fever poison, except one, a light colored, almost white stone hard and compact quarried on the south side of the bay opposite Havana, remote from any centre of population. If efficient fumigation and disinfection of the vessel and crew be practiced, and the crew not allowed to go ashore for five days previous to her leaving an infected port. Experience thus far seems to prove that no danger will follow the entrance of these vessels into other ports.

“A certificate or bill of health truthfully detailing all that has happened to a vessel in a foreign port, her movements there, what has been done to her and for her if infected, the sanitary status of her crew, the number that have been sick, and where, and of what—in short, all that can possibly be known of her—is fast becoming a necessity to the prevention of the introduction of contagious and infectious diseases and to sanitary science. Health officers, the sanitary guardians of ports, are entitled to them, and commerce is entitled to them.

“Mystery and the concealment of facts or the perversion of truth do immense harm to commerce. Let all the truth be known, and then a health officer will know how to act.

“He will know what to do with the one infected vessel out of eight or ten which arrives at his port. He will then be able to establish an intelligent quarantine, founded on a knowledge of what dangers he is to apprehend. A few vessels may suffer more or less detention, but the great mass of commerce will be greatly benefited. The certificate or bill of health should be issued by some one who is responsible to the government to whose port the vessel is bound. As far as my observation goes local boards of health are not to be relied on for the necessary facts for an intelligent bill of health, a certificate which conveys all the necessary information. The local board is interested in the welfare of its port and not in that of the port to which the vessel is bound.”

We would call attention to some of the statements of Dr. Jones, of Pennsylvania, on School Hygiene. He speaks in decided terms of the danger of schools being the source of spread of contagious diseases, and says these local boards of health and school commissioners through proper officers should carefully watch for an outbreak and further prevent its spread or make it as inconsiderable as possible. He insists upon the air in the school room being frequently renewed, and that a sufficient measure of air be allotted to the children in the room while assembled in session. The temperature should not be below 55° F., or rise above 60° F. He deprecates in stormy words, the pushing of children in the studies to the great detriment of their physical development. He says :

“There is little doubt that the mental pressure, which is now so common in schools, causes an excessive waste of nerve force for mental work, which should be subservient to bodily growth and development, and it is important that parents should be aware of the possibility of sacrificing physical to mental development. The reverse may certainly occur, the result being a fine, but not a very intellectual animal, and therefore in this, as in many things, it is ‘the happy medium’ that is the best and safest. Mental overstrain in poorly fed children and bad hygienic surroundings produce a vast amount of diseases. The system of ‘cramming for exhibitions,’ and what Prof. Huxley calls the ‘abomination of desolation,’ of competitive examination, prizes, etc., that goad on children of various strength and capacity to tasks, that the brightest and strongest are hardly equal to, are responsible for much injury of mind and body; and that the higher education, now so earnestly demanded for the gentler sex, is too often bought at the expense of shattered constitution and unstrung nerves. But if these things must be, in the name of all things and justice, let them be surrounded by all the checks that can lessen their power for evil.”

And in addition to this Dr. Folsom in his paper on “The Prevention of Insanity” says in speaking of the hygiene of infancy and childhood :

“In boyhood and girlhood comes first the danger from confinement in the bad air of school rooms, and then the hurry and worry, and strain of six, seven, or eight branches of study, competitive examinations, prizes, want of outdoor exercises, insufficient time for

meals, evening study, morning languor, and, after a few years, the break down with which so many of us are already too familiar. When the strain of the school is superadded to the excitement of late parties, the smash comes only so much sooner. The nonsense of stuffing the brain to secure a fine mind is so general that the best teachers of private schools assure me that it is very difficult to convince their patrons that their children are not neglected when they have only three or four studies at a time to master thoroughly, without fret or confusion. Such intelligent teachers have to constantly protest against the rush of the father and mother to overload their children's heads at the expense of their health."

In addition to this, Dr. Jones says of the furniture of the school :

"As the muscles of the back become fatigued by sitting long in a constrained position the tendency is to bend over, more and more, and this faulty position, at first assumed for temporary relief, becomes by frequent repetition, a confirmed habit, and may end in permanent deformity. A distinguished orthopedic surgeon has stated that 90 per cent. of curvature of the spine not induced by local disease, are developed during school life, and we are aware that stooping and crooked position at schools has a sad effect upon the heart and lungs and abdominal organs as well as on the spine and sight.

"The most common and important defects in school furniture are the benches with unsuitable backs, too great a distance between the seat and the desk, too great a distance between the height of the seat and the desk. The size and form of the desk and its relation to the seat are not without their affect upon the welfare of the eyes.

"To use desk and seats of the same pattern and size for a large number of children of all ages as in our public schools, is not more rational than the system of distribution of 'army clothing,' by which, as Dickens complains, 'all the tall soldiers got the short pantaloons and the short soldiers got the long ones.' If a child is uncomfortably seated he is pretty sure to lean forward to the desk, thus bringing his eyes too close to their work and at the same time overfilling their blood vessels by gravitation. The backs of the seats ought to be straight, and consist of a piece of wood four inches broad. If this is adjustable it would suit any child. The proper height of this back ought to be close above the hips, to support the

loins sufficiently to make it easy and comfortable for the most delicate children to sit perfectly straight.

“They ought to be broad enough to support almost the whole length of the thigh, the height of the seat enough to allow the sole of the foot to rest in its natural position, and the desk high and close enough to allow the elbow to rest upon it without displacing the shoulders. A flat desk promotes stooping position with its attendant evils, of close sight and gravitation of blood to the eyes, and besides does not permit the direction of vision most favorable to the natural and easy movements of the eye balls.

“An inclination of 40 to 50 degrees is considered the best for reading, as when the body is erect and the eyes are directed downward and forward, this brings the page at about right angle with the line of vision. This would be steep for writing, but by a simple mechanism the desk and seat can be made adjustable to any child.”

But we must forbear. It would delight us and our readers if we could make this incomplete report a full record of the transactions. We cannot close without expressing the pleasure with which we listened to the address of Dr. Gibon, “Health the True Nobility,” being his subject. This, to us, seemed the cream of the session. In combating filth, impure air, want of personal cleanliness, and surroundings, all of which were so inimical to good health and happiness, the speaker charmed his audience with his elegance of thought and of expression—but the man—his manner and his address all seemed consistent. We expect at no distant day to see this Association of sanitarians looked up to and advising the regulation of the whole country and through the national legislature shaping the course of sanitation in all the States.

The hospitality of Savannah was equal to its ancient reputation, and the beautiful streets and squares, the delightful excursion to the mouth of the river, the attention to the wants and comfort of the visitors, all mingle with the recollections of the indoor work of the association to make pleasing memories of this year’s session.

THE INFLUENCE OF ANÆSTHETICS ON THE HEART; AND ON THE ANTAGONISM OF POISONS.

By WILLIAM MURRELL, M. D.

Dr. Ringer has recently published two papers (*Practitioner*, June and July, 1881) which throw considerable light on the action of anæsthetics on the heart; and incidentally on the vexed question of antagonism. The observations were made with Roy's apparatus, a description of which will be found in Dr. Roy's paper "On the Influences which Modify the Work of the Heart" (*Jour. of Physiol.*, vol. I, p. 452). Considerable difficulties have hitherto been experienced in working this apparatus, arising chiefly from the inconvenience of having to obtain fresh blood for each experiment.

Dr. Ringer finds that the desiccated defibrinated bullock's blood, imported by Parke, Davis & Co., of Detroit, Michigan, answers the purpose admirably. It can be readily obtained, as it is frequently used for enemata, in cases of gastric ulcer, etc. For physiological purposes it is dissolved in distilled water, and then diluted with saline, one part of blood mixture being used to two of salt solution. In each experiment three ounces were used, the same blood being employed in the same series of observations, so that the poison and its antidote were intermixed.

Chloroform acts powerfully on the ventricle of the frog's heart. Like lactic acid, muscarin and jaborandi, it lessens both the height and duration of the trace until, finally, the heart is arrested in diastole. In one experiment, a minim of chloroform nearly stopped the ventricle; and, when the heart has almost ceased beating, the addition of two ten-minim doses of strong solution of ammonia at once restored its action, until the contractions became almost as powerful as at first. The addition of ten drops of chloroform again stopped the heart. This shows the powerful paralyzing effect of chloroform, and demonstrates most conclusively the mutual antagonism existing between chloroform and ammonia.

It is clear that chloroform does not arrest the ventricle by stimulating the inhibitory apparatus, for the portion of the heart employed contains no inhibitory nerves. Chloroform clearly paralyzes the muscular substance of the heart, for it is well known that the muscular tissue will beat rhythmically without the presence of

nervous ganglia. It is evident, therefore, that did the chloroform paralyze only the ganglia of the ventricle, the ventricle itself would still continue to beat. Further experiments made with the lower half only of the ventricle render this certain, the ganglionless and nerveless portion being affected in exactly the same way as the whole ventricle.

Atropia does not antagonize the action of chloroform on the ventricle; nor will the previous addition of atropia prevent the action of the chloroform. Ethidine dichloride affects the ventricle in exactly the way as chloroform. Ether affects the heart in a far less degree than either chloroform or ethidine dichloride. Large doses accelerate the heart's action, and make each beat a little weaker; but the amount of work done is considerably greater, the increased frequency more than compensating for the diminished force of each contraction. Ammonia and ether, like chloroform and ammonia, are mutually antagonistic as regards the whole ventricle. Bromide of ethyl arrests the ventricle, acting on the muscular substance. It is far less powerful than chloroform, but more poisonous than ether.

Iodoform and ammonia are mutually antagonistic, as shown by their action on the ventricle. A fifth of a grain of iodoform nearly stopped the heart, and then ten minims of a one per cent. solution of strong ammonia restored the contractions, which were again arrested by another dose of iodoform. This was repeated on the same heart three successive times.

The importance of these observations cannot be over-estimated, throwing, as they do, a new light on the whole subject of antagonism. Rossbach (Pflüger's *Archiv*, Band xxi, Heft 1, p. 1, 1879) contends that drugs are never mutually antagonistic. He maintains that, when a tissue is paralyzed by one poison, it is impossible to stimulate it by another. For instance, whilst atropia, he says, antagonizes pilocarpine, pilocarpine cannot antagonize atropia; atropia paralyzes the sweat apparatus, and pilocarpine is no longer able to stimulate it into action. He admits that after small doses of atropia pilocarpine can produce sweating, and this he explains by assuming that atropia paralyzes first the nerve of the sweat-gland, and later the gland-apparatus itself. After a small dose of atropia the nerve only is paralyzed, and then the pilocarpine can still

stimulate the glandular cells ; but a large dose of atropia paralyzes the cells also, and then pilocarpine is powerless.

Dr. Ringer's recent experiments demonstrate the fallacy of this argument. The lower half of the ventricle consists of only one substance, muscular tissue, so that the antagonism cannot be due to an action on different structures.—*London Medical Record*.—*Canadian Journal of Medical Sciences*.

INCREASE OF NEGROES IN THE UNITED STATES.

M. Chervin, in a communication to the Paris Société de Médecine, draws attention to the fact that while up to the census of 1860 the negroes in the Northern States numbered 4,880,000, in that of 1880 they had increased to 6,577,151, i. e., an augmentation of 35 per cent. This is a result well worthy of attention, for it always has been hitherto admitted that when an inferior race is placed in contact with a superior one, with which it has to maintain the struggle for existence, it is always, in a future more or less near, condemned to disappear in consequence of the excess of deaths over births. M. Chervin attributes this great fertility of the negro race in the United States to the liberty which they now enjoy there, and believes that a very different result would have been had it continued in a state of slavery.—*Union Med.*, Nov. 27.

Hop Bitters.—The following is given as the composition of hop bitters :

℞
 Tincture of hops, ̄ ss.
 Tincture of buchu, 3 iij.
 Tincture of Senega, 3 iij.
 Podophyllin dissolved in spirits of wine. ̄ ss.
 Tincture of cochineal, gtt. xx.
 Distilled water, to Oj.

M

These ingredients will cost about ten cents. Selling price, one dollar.—*Canadian Journal of Medical Sciences*.

NOTES.

The Adaptable Porous Felt Splint.—Our readers will probably have noticed the advertisement of the Ahl Adaptable Porous Felt Splint Co., in our advertising pages. If they have not we would call their especial attention to it. We have known and used this splint for many years, and pronounce it, emphatically, not only the best splint in the market, but the only manufactured splint which a surgeon ought to use. Any one who has once tried a set of them and learned their manifold advantages will not practice without them. They are, indeed, especially in their present improved form, as near the perfection of a splint as we can imagine. In years past we have published various articles upon them, and a longer experience more than confirms all the good that has been said of them.

We strongly advise our readers to apply to the company for a descriptive illustrated pamphlet, which is sent on application, and which will inform them of the details about these, in our opinion, quite unequaled surgical splints.

We endorse this recommendation of the *Medical and Surgical Reporter*.

Unquestionable Testimony.—Dr. John Morris, Baltimore, Md., Dr. T. Hamilton Bush, New York city, Dr. J. J. Collins, Guilford, Indiana, and Dr. Edward Alcorn, Hustonsville, Ky., all physicians of the highest standing, write that they have tried Powell's Beef, Cod Liver Oil and Pepsin, (the superior food tonic nutritive and digestive), and recommend it highly.—*Clipping*.

The Accuracy of Clinical Thermometers.—We again invite the attention of our readers to the necessity of accuracy in their thermometers.

In a circular from Leonard Waldo Esq, astronomer in charge of Winchester Observatory of Yale College, we find the following :

Too great a desire to economize time, good material and skilled labor has led, in the making of thermometers, to the following faults : 1. The graduation is sometimes started from one point of the scale, near the normal, and the size of the capillary tube is guessed at. No upper point being fixed by the maker, the higher

graduations may be erroneous to the extent of several degrees. 2. Too much air separating the index from the column of mercury causes the index to rise with a jerky motion; air above the index forces the index down when the thermometer is taken away from the body. In some thermometers errors from this cause amount to two degrees at high temperatures. 3. New thermometers increase their readings rapidly during the first months after manufacture, so that instruments which were right when made may change their indications as much as two degrees within a year.

Mr. Waldo after examining 700 thermometers from various parts of the country has demonstrated the gross inaccuracy of the cheaper clinical thermometers.

Inaccuracies are corrected at the Yale Observatory at the low rate of *fifty cents*.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Michigan State Medical Society. For the Year 1881. No. 1. Vol. VIII. Lansing: W. S. George & Co., Printers and Binders. 1881.

A Guide to Shipmasters Visiting the Cape Fear and other Rivers. Printed for Gratuitous Distribution by the North Carolina Board of Health. Raleigh: News and Observer, State Printers. 1881. Pp. 10.

Transaction of the North Carolina Pharmaceutical Association. At its Second Annual Meeting. Held at Newbern, August 9th and 10th, 1881. Also Constitution and By-Laws, Pharmacy Act, &c. Monroe, N. C.: Enquirer Steam Power Presses. 1881. Pp. 64.

On the Poisonous Properties of Quinine. By William O. Baldwin, M. D., of Montgomery, Ala. With Remarks by J. Marion Sims, M. D. Reported from the Medical Gazette, October 22, 1881. New York: Bermingham & Co., Publishers, 1260 and 1262 Broadway. Pp. 8.

Facts Concerning Vaccination, and Sanitary Rules to be Observed During Prevalence of Small Pox. Circular of the State Board of Health. Sacramento, Cal.: Pp. 6.

Restriction and Prevention of Scarlet Fever. Document issued by the Michigan State Board of Health. Revised Edition. 1881. Lansing, Mich.

A New Gynæcological Table. By W. A. B. Sellman, M. D. Baltimore, Md., 249 Carrollton Avenue. Pp. 3.

Contagious Diseases. Scarlet Fever, Diphtheria, Small Pox, Typhoid Fever, etc. General Rules for their Prevention and Restriction. Issued by the Michigan State Board of Health. December, 1881. Lansing, Mich.

The Physician's Daily Pocket Record. Comprising a Visiting List, Many Useful Memoranda, Table, etc. By S. W. Butler, M. D. Sixteenth Year. New and Thoroughly Revised. Sterotype Edition, with Metric Posological Table, etc. Edited by D. G. Brinton, M. D. Philadelphia: Published at the office of the Medical and Surgical Reporter, 115 South Seventh Street. 1881.

Ninth Annual Meeting of the American Public Health Association. Held at Savannah, Ga. Savannah, Ga.: Morning News Steam Printing House. 1881. Pp. 84.

Atlantic City as a Health Resort. Embracing Official Reports, Meteorological Tables, &c., Concerning the Climate of Atlantic City, N. J., the Testimony of Eminent Physicians as to its Effects on Various Forms of Disease, Hygienic Hints for Invalids at the Seashore, and Information about the Sanitary Condition of Atlantic City. By Boardman Reed, M. D. Second Edition. Philadelphia: Allen, Lane & Scott's Printing House, Nos. 229-231 South Fifth Street.

Transactions of the New Hampshire Medical Society at its Ninety-First Annual Session. Held at Concord, N. H., June, 1881. Concord: Printed for the Society by Evans & Sleeper.

Second Annual Report of the State Board of Health of South Carolina, for the Fiscal Year Ending October 31, 1881. To the Legislature of South Carolina. Charleston, S. C.: Walker, Evans & Cogswell, Printers, Nos. 3 Broad and 109 East Bay Streets. 1881.

We are indebted to Mr. P. Heinsberger for the following books:

The Physicians Clinical Record for Hospital or Private Practice with Memoranda for Examining Patients, Temperature Charts, etc. Philadelphia: D. G. Brinton, 115 South Seventh Street. 1881.

The Therapeutics of Gynecology and Obstetrics Comprising the Medical, Dietetic, and Hygiene Treatment of Diseases of Women. Second Edition, Thoroughly Revised and Greatly Enlarged. Edited by Wm. B. Atkinson, A. M., M. D., &c., &c. Philadelphia: D. G. Brinton, 115 South Seventh Street. 1881. Pp. 571.

A Manual of Ophthalmic Practice. By Henry S. Schell, M. D. With Fifty-Three Illustrations. Philadelphia: D. G. Brinton, 115 South Seventh Street. 1881. Pp. 263.

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